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ABSTRACT

This curriculum guide for nutrition education grade 5, was designed to incorporate knowledge of thirteen concepts into the child's decision-making processes as a food consumer. These concepts, as covered by the guide, are: affecting bodily well-being through nutrition; affecting dental health through nutrition; models for diet selection; controlling bacterial growth in foods; how to keep foods safe temporarily; treating foods to prolong safe usage; ethnic food traditions; family food customs; effects of peer influence on food habits; effects of advertising on food choices; supply of money affects food choices; accessibility of food affects food choices; preparing foods in different ways. Each concept is taught in one lesson which can usually be accomplished in about a half hour. Several duplication masters are included. (RE)

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Making Nutrition Education Count

A GUIDE FOR NUTRITION EDUCATION K-6

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Making Nutrition Education Count A Guide for Nutrition Education K-6

JULY 1975

Prepared by Patricia Kratky, R.D. and Lois Haigh with assistance in development of the curriculum format from LaVonne Elsbernd.

The curriculum has been developed as a Pilot Project with funds provided by the Minnesota State Department of Vocational Education under the direction of Audrey Grote, Vocational Program Supervisor, Consumer-Homemaking, in cooperation with the Clay County Vocational Cooperative Center. The project administrator was Melvin O. Salberg.

CLAY COUNTY VOCATIONAL COOPERATIVE CENTER
2323-16 Avenue South, Moorhead, MN 56560

We wish to thank the K-3 teachers in Barnesville, Dilworth, Glyndon-Felton and Hawley elementary schools for their consideration and help during the testing period for the project.

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Many suggestions from all of these teachers have been incorporated into the lessons contained in this curriculum.

When duplicating these materials please give credit to Clay County Vocational Cooperative Center and the authors -- Thank you.

CLAY COUNTY VOCATIONAL COOPERATIVE CENTER
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Moorhead, MN 56560

MAKING NUTRITION EDUCATION COUNT

Only a half century ago, the science of nutrition was born in test tubes and animal experiments. Early knowledge demonstrated the effect of nutrition on health with remarkable clarity. Recent research has expanded the consequences of inadequate nutrition. Using recent accurate information to influence personal habits demands that the information be presented to every individual in an understandable and meaningful manner.

An infant's eating patterns becomes the adult's eating habits. The longer an imperfect pattern is continued, the more difficult it becomes to incorporate accurate information into the pattern. Helping the *elementary* student to incorporate accurate nutrition information into his life style becomes the goal of nutrition education.

Today's child has significant control over his eating pattern. Breakfast foods are often chosen by children. Family values toward sleep and family schedules may force the child to prepare breakfast for himself. Pocket money is often spent for self-selected snacks and meals. Some children prepare meals when the pressure of family schedules allow only individual sandwich meals. Nutrition education must influence these existing areas of decision for children to be meaningful to them.

WHAT IS NEEDED

Many factors influence an individual's dietary decisions. Thirteen of these factors were included in the concepts for this curriculum. While the concepts are related to each other, a given progression is not necessary to build to the final decision-making skill. The concepts follow groupings: affecting the health of the individual, the individual's social background and the individual's personal resources.

CONCEPTS AFFECTING THE HEALTH OF THE INDIVIDUAL

Affecting bodily well-being through nutrition
Affecting dental health through nutrition
Models for diet selection
Controlling bacterial growth in foods
How to keep foods safe temporarily
Treating foods to prolong safe usage

CONCEPTS AFFECTED BY SOCIAL BACKGROUND

Ethnic food traditions
Family food customs
Effects of peer influence on food habits
Effects of advertising on food choices

CONCEPTS AFFECTING PERSONAL RESOURCES

Supply of money affects food choices.
Accessibility of food affects food choices
Preparing food in different ways

HOW TO FIT IT IN

Each concept is taught in one lesson which usually is finished in slightly more than one half hour. More than one concept is taught in some lessons. The primary grades develop awareness in each of the factors influencing nutrition. The upper elementary grades apply and strengthen this awareness.

Concepts affecting health integrate into existing curricula for health and science. Careers in health and food production are also identified.

Each grade level has a different set of activities designed for that grade level's interests and traditional activities. Each activity builds upon skills gained in the preceding grade's activity for that concept. These are exemplary lessons and may need to be adapted for use in a specific classroom.

Each lesson involves an activity. All activities involve oral communication skills. Some activities use illustrative, dramatic, or written skills. The skill required by the activity depends upon the students level of knowledge.

SYMBOLS

Each lesson plan uses symbols to indicate

materials needed

reference materials for student use -- books in large italic capitals -- films, filmstrips, pamphlets in italic.

outline of teaching procedure

outline of student activities

BACKGROUND INFORMATION for the teacher's use and RECIPES are included when necessary.

EQUIPMENT

Each school should make available to every classroom upon need:

dish sponge
mild detergent
wax paper
several sets of graduated measuring cups and spoons
liquid measuring cups
paper towels
large bowl (4 quart)
small bowl (2 quart)
large stirring spoon
covered pitchers
rubber scrapers
hot pads
electric fry pan or selection of covered saucepans and hot plate
manual can openers
disposable dishes and silver as needed
laminated National Dairy Council Food Models

Other equipment will be needed as each lesson indicates.

Plans for a portable mini-kitchen will be available after January 1, 1976.

MAKING NUTRITION EDUCATION COUNT

GRADE 5

LESSON CONCEPT	PAGE NUMBER
Affecting bodily well-being through nutrition	5-1
Models for diet selection and ethnic foods	5-13
Family food traditions	5-18
Controlling bacterial growth to keep foods safe temporarily	5-20
Affecting dental health through nutrition	5-28
Effect of advertising on food choices	5-30
Accessibility of various forms of foods produced in Minnesota	5-32
Peer influences and supply of money affect food choices	5-33

CONCEPT: Affecting bodily well-being through nutrition

GENERALIZATION: Food is the usual source of nutrients needed by the body to form and maintain tissues and sustain activity. Each nutrient has specific functions in the body.

BEHAVIORAL OBJECTIVE: The student will discover the functions of nutrients in food by playing the game -- Food and You.

* *

--Food and You -- game packet (attached)

-*"Your Body and How It Works"*
American Medical Association
535 North Dearborn Street
Chicago, IL 60610

"Food News -- (Nutrients)"
National Dairy Council
111 Canal Street
Chicago, IL 60606

HOW TO BUILD A BODY
Julian May
Creative Education Society
Mankato, MN 56001

FOOD AND LIFE
Gerald Ames and Rose Wyler
Creative Education Society
Mankato, MN 56001

--Assemble Food and You game packet for each student. This can be placed in a learning center or an activity center since it is an individual learning experience for the students.

-Play the Food and You game.

Food and You

Someone Told Me I Am What I Eat

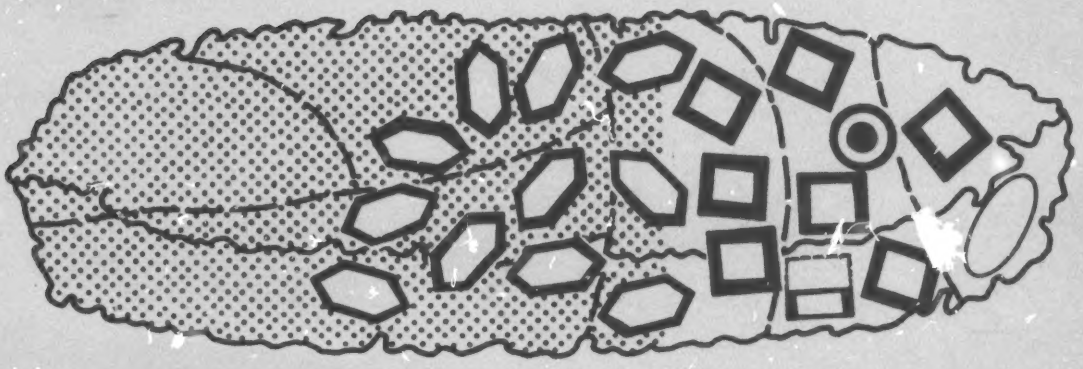
I am what I eat!
How isn't that neat?
But how can it be
That meat is me
Are beans my legs
My kneecaps, eggs?
Is my plasma made of milk
My skin from something soft as silk?
Potatoes cannot make an ear
Or any part of me I fear.
Can someone solve this mystery
Of how my food turns into me?

(From Illinois Teacher September-October 1970)

Maybe a cabbage isn't your ear either, but you can find out how food turns into you by playing Food and You.

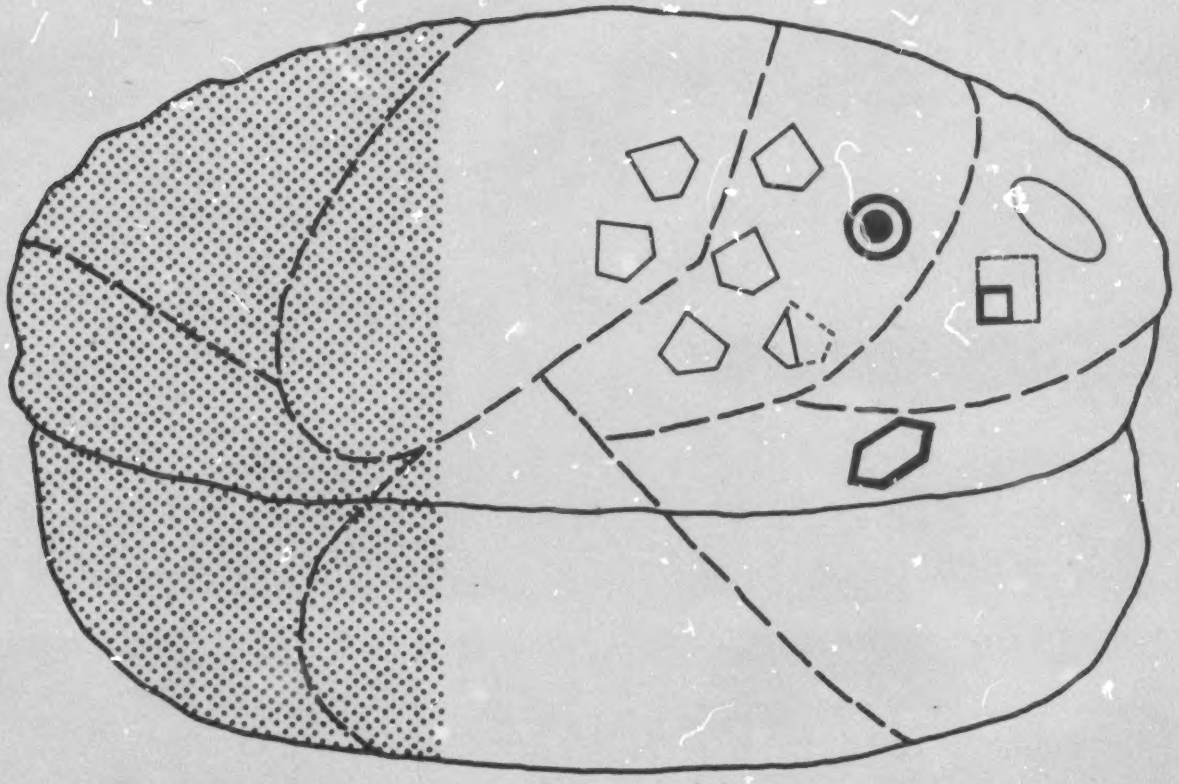
The next two pages in this game are pictures of foods you like to eat. Choose one of the food pictures, remove it and then turn to page four to find out how that food turns into you.

HAMBURGER

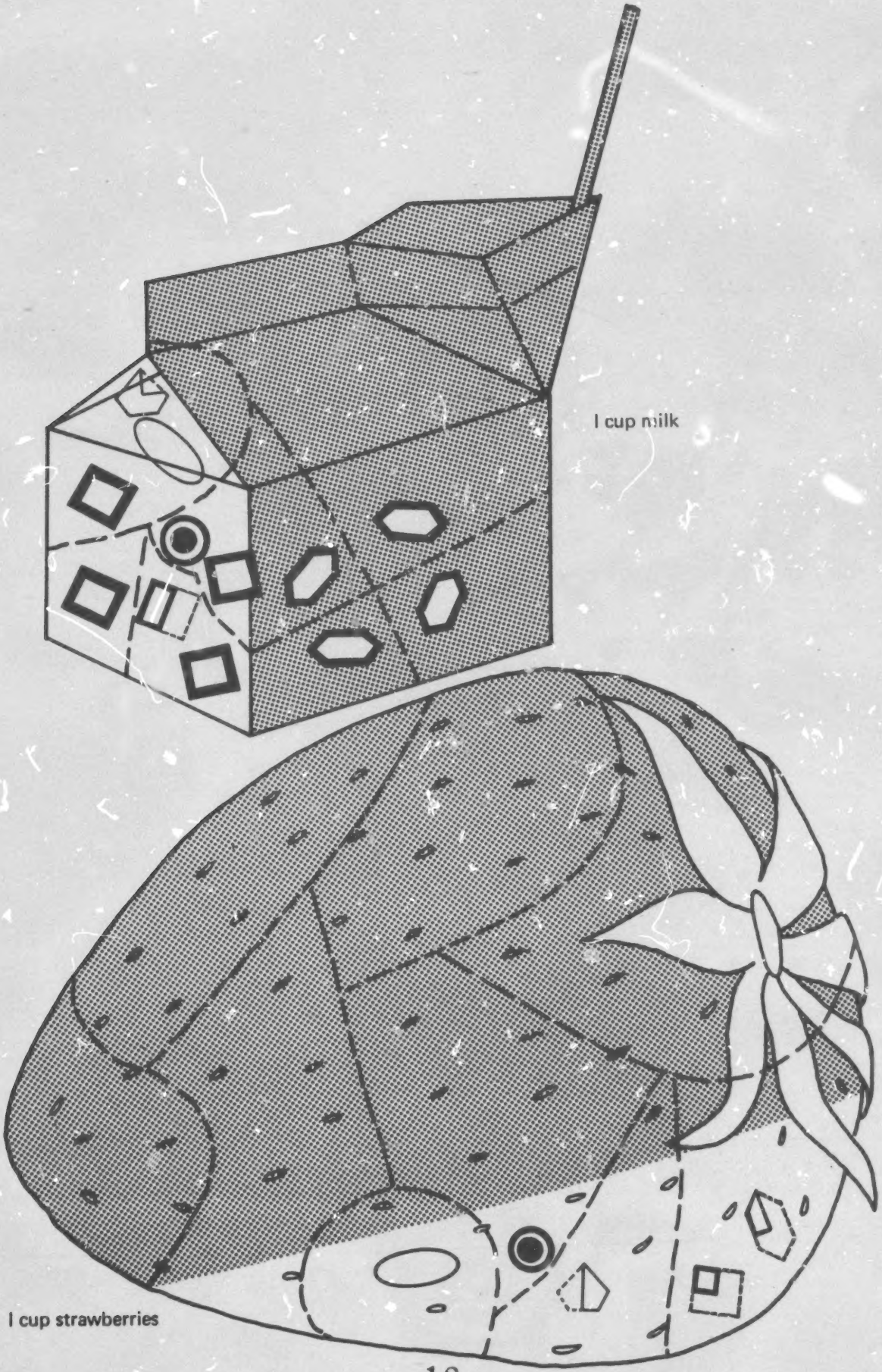


NUTRIENT SYMBOLS

PROTEIN CARBOHYDRATE FAT MINERALS VITAMINS WATER



BUN


1 cup milk
1 cup strawberries

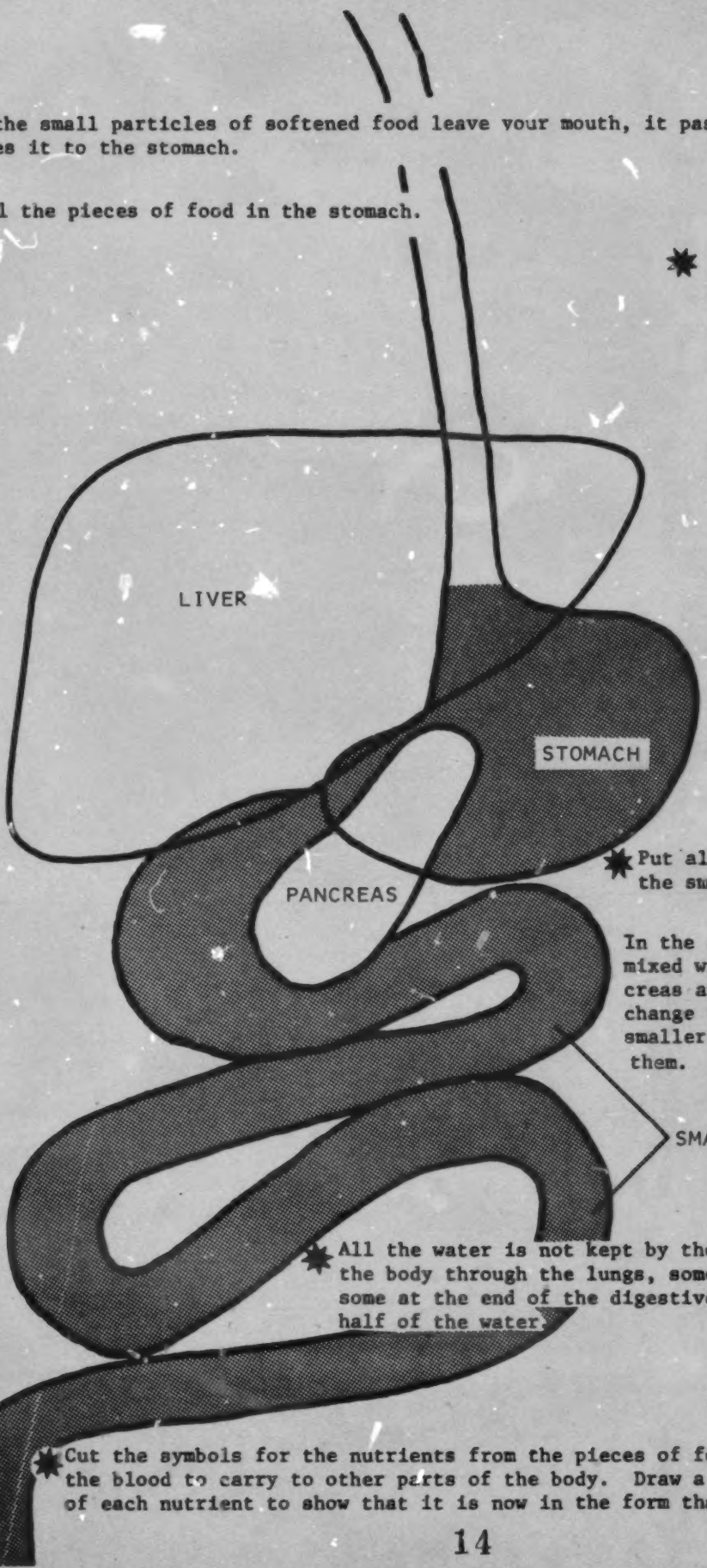
Your teeth and the juices in your mouth break the food into small pieces and soften it. This is the beginning of how food turns into you.

✸Cut the picture of the food you choose into small pieces along the dotted line.

When the small particles of softened food leave your mouth, it passes through a tube which carries it to the stomach.

✸ Put all the pieces of food in the stomach.

✸ Take out the pieces of food one at a time. The first pieces you take out should have water symbols on them; the second carbohydrate symbols. After that take out all the pieces with protein on them. The last pieces taken out will be those with fat on them. Protein, carbohydrates, water and fat carry with them vitamins and minerals. These six parts of food are called nutrients.



✸ Put all of these pieces into the small intestine.

In the small intestine the food is mixed with juices made in the pancreas and liver. These juices hel change the larger nutrients into smaller ones so the body can use them.

✸ All the water is not kept by the body. Some water leaves the body through the lungs, some through the skin and some at the end of the digestive process. Discard about half of the water.

✸ Cut the symbols for the nutrients from the pieces of food to make them ready for the blood to carry to other parts of the body. Draw a line through the center of each nutrient to show that it is now in the form that the body can use.

5-6

Then the nutrients soak through the walls of the small intestine and into the blood vessels. As the blood flows through the blood vessels, it picks up the nutrients and carries them to the parts of the body that need them. It also picks up oxygen from the lungs to carry to all the parts of the body to use.

✸ Cover the body with the cut out pieces of the nutrients.

All of the body parts are made up of tiny cells. These cells use the nutrients, and all cells use water.

✸ Put some water in the cell.

Some of the nutrients, such as carbohydrates and fats, are used by the cells for energy. Energy helps you move, keep warm, think, and grow. If you do not need all of the energy the nutrients supply, the left over amount of energy is stored by the body as fat.

✸ Put some of the carbohydrates and fats into the energy producing part of the cell and some into the energy-storage part of the cell.

The nutrient protein can either give you energy or help build new cells. The proteins in the nucleus of the cells are storehouses of information on how to make new cells just like themselves. All of the other parts of the cells contain protein also.

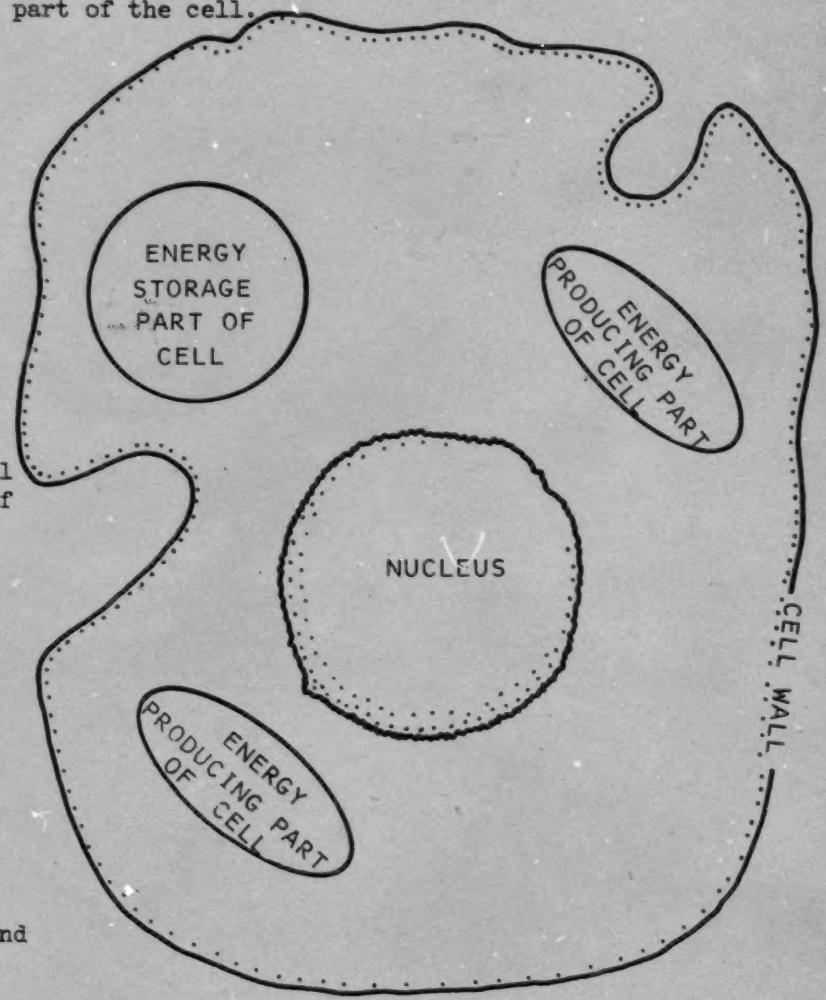
✸ Put some of the protein in the nucleus of the cell, some in the energy producing part of the cell and some of the protein in all of the remaining parts of the cell.

Vitamins keep all cells healthy.

✸ Put vitamins in the cell.

Minerals build certain kinds of cells and control the activities in all cells.

✸ Put minerals in the cell walls and some in the rest of the cell.



AN ENLARGED MODEL OF A CELL

As you add new cells, your body grows. Growing from a baby to as you are now requires many cells. If you cut yourself, new cells will grow to replace the injured cells.

✸Draw a picture of yourself as you will be when you are grown up.

This is how food turns into you!

✸Choose another food and turn it into you.

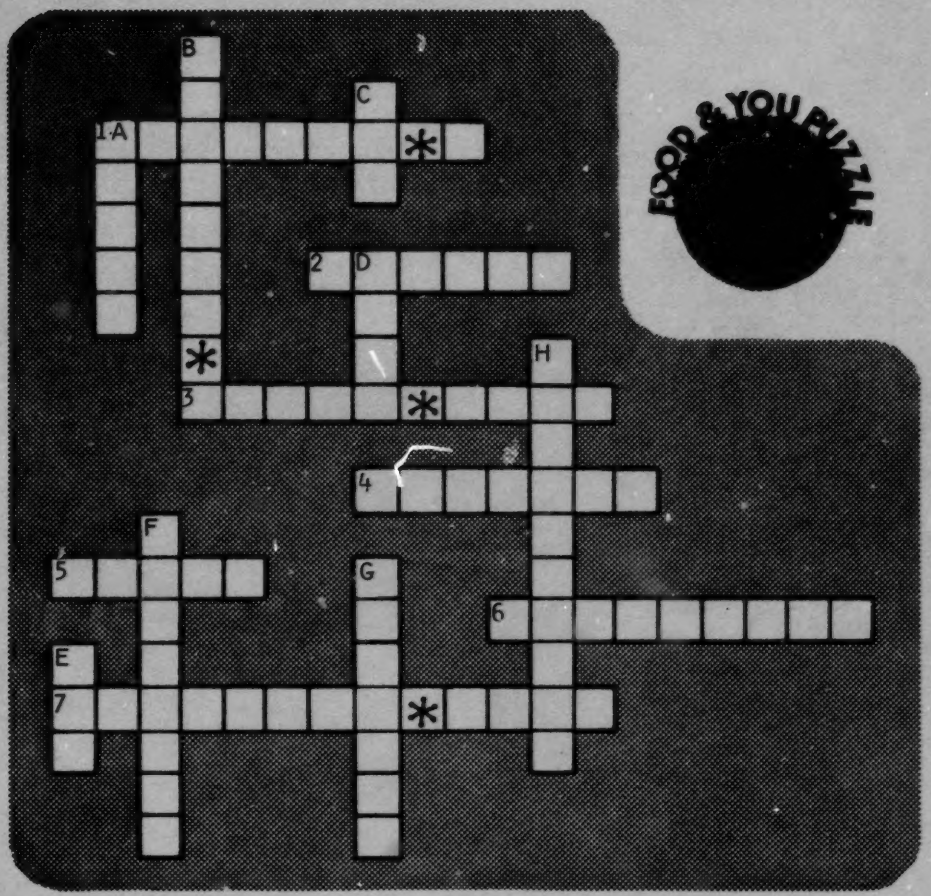
IF YOU HAVE TIME, DO ONE OR BOTH OF THESE:

✸ Use your writing skills to write an original poem about how food becomes you.

✸ Scientists are curious. They are always looking for answers to hard questions. One question that scientists found an answer to after many years of study and work was the way the body uses food. That answer dealt with the nutrients in the food we eat. They named the nutrients protein, carbohydrates, minerals, vitamins, fats. They then discovered that water was important too. It helps all the other nutrients do their work in the body.

They worked on and found out other important things about the nutrients in food.

By working the Food and You puzzle, you can find out what the scientists discovered. You will need a science book to help you. The library is a good place to look for information too. Your teacher will have more resource material for you.



* Two words

Across

1. Only a few foods have this vitamin.
   Fortified milk has it
   Sunlight helps the body make it.

2. Whole grain and enriched cereals and bread are good sources of this B vitamin.

3. Cell proteins are built from them.

4. The form of sugar your body uses for energy.

5. Carries all the other nutrients.

6. In Food and You, this food supplied the most protein.

7. Another name for Vitamin C.

Down

A. Tiny hairs on the walls of the small intestine that take in the nutrients from the blood.

B. You can make it from the carotene in carrots.

C. This letter name of the protein that is the storehouse of information on how new cells are made.

D. The mineral needed by all cells, especially red blood cells to help carry oxygen.

E. This nutrient gives the most energy.

F. Sugars and _____ are carbohydrates.

G. A mineral found in milk which builds strong bones and teeth.

H. Two B vitamins are Thiamin and _____.

KEY TO FOOD AND YOU PUZZLE

ACROSS

1. Vitamin D
2. Niacin
3. Amino Acid
4. Glucose
5. Water
6. Hamburger
7. Ascorbic Acid

DOWN

A. Villi
B. Vitamin A
C. DNA
D. Iron
E. Fat
F. Starches
G. Calcium
H. Riboflavin

CONCEPT: Models for diet selection and ethnic foods

GENERALIZATION: A balanced diet of foods from the four food groups can be selected from foods native to any region.

BEHAVIORAL OBJECTIVE: The student will compare nutritionally adequate Latino foods with typical midwestern foods for use of similar foods and food patterns based on the food groups.

* *

--Latino foods -- names and ingredients for a large bulletin board (attached)

- *Mexican-American Foods* --(poster)
Family Circle
488 Madison Avenue
New York, NY 10022

SUNSET MEXICAN COOK BOOK
Lane Books
Menlo Park, CA 94025

THE BUYING GUIDE FOR FRESH FRUITS, VEGETABLES, HERBS AND NUTS
Blue Goose, Inc.
P.O. Box 46
Fullerton, CA 92632

NOTE: This lesson would be most effective if used as part of a social studies unit on minorities in America or Minnesota minorities. Or, if the students indicate an interest in tacos or other Mexican-American foods, this lesson would also be effective.

--Arrange a large bulletin board of Latino foods. Names and ingredients of the foods will need to be included -- use only the Spanish names. If possible, find the pictures of some of the foods to add interest to the bulletin board. The title for the bulletin board could be "How Many of These Latino Foods Have You Tasted?"

Use the bulletin board as a discussion aid when talking about Latino foods and typical midwestern foods.

Ask the students if they recognize or have eaten any of the foods on the bulletin board: Are they like any foods they eat? Are they made from some of the same ingredients as foods they eat? Can you name some of these foods? How do Latinos use them? How do midwesterners use them? Would you be getting foods from the four food groups if you ate these Latino foods? Have the students decide which of the four food groups the Latino foods belong in.

--Discuss bulletin board display of Latino foods with teachers and class. Arrange the foods in the four food groups. Learn the names of some of these Latino foods. Think of some midwestern foods which are made from some of the same ingredients in the Latino foods.

ADDITIONAL ACTIVITIES: Find recipes for Latino foods. Plan a menu with foods from the four food groups using Latino foods. Plan a typical midwestern menu which has recipes with some of the same ingredients as the Latino foods. Be sure you include foods from the four food groups.

Prepare a Latino recipe.

Invite a member of this ethnic group to class to talk about food and customs related to foods.

Plan a type A Latino menu for school lunch and ask the school lunch cook to serve it someday.

BACKGROUND INFORMATION FOR LATINO FOODS

Latino foods are usually taken from several cultural backgrounds. Mexican and Spanish, and American foods are the most commonly used in our area. Many times food choices are as affected by economic situation as cultural backgrounds of people who eat them. The foods listed here reflect the Mexican-Spanish heritage. Foods marked with a * should be classified in more than one food group. Spanish names are given all foods.

MILK GROUP

chocolate (choh-koh-lak-tek)

Hot chocolate made with milk, unsweetened chocolate, and flavored with cinnamon. In Mexico a molinillo, a wooden beater, is used to make the chocolate frothy.

chogos zamarons (choch-gos sah-moh-rah-ros)

Milk curds are cut into squares, then slowly heated until firm. They are served in a sweet cinnamon flavored syrup.

queso (keh-soh)

Jack and Longhorn cheese are often used. Both of these are types of cheddar cheese. Cream cheese and sour cream are sometimes used are garnishes.

*quesadillas (keh-sah-thee-yas)

Tacos with cheese filling garnished with green chili.

FRUIT AND VEGETABLE GROUP

chili (chee-leh)

The whole family of peppers are chilis. Green bell peppers, pimentos and paprika are mild and sweet chilis. Anaheim, Jalapeno, and Serrano are hot green chilis that are often available locally. Occasionally yellow peppers are available pickled or canned. Chilis are often combined with tomatoes to make salsa (sauces). Chilis are good sources of Vitamin C.

ensalada de nochebuena (en-sah-la-tah teh non-chek-booth-nah)

Fresh fruits are arranged on greens. Beets, oranges, apples, bananas, fresh pineapple, limes, pomegranates, peanuts are often used. Orange juice or a vinegar and oil dressing flavors this salad traditionally served during the Christmas holidays.

guacamole (guah-kah-moh-leh)

Mashed avocados are flavored with lemon or lime juice, garlic, coriander and sometimes chilis. It is used as a salad, a dip for tortillas, or as a part of meat dish.

gazpacho (gahs-pak-cho)

Fresh diced vegetables are added to this cold soup. Tomatoes, onion, green peppers and celery are often used. Other vegetables such as avocados and radishes may be added to the chilled chicken broth.

salsa cruda (sahl-sah kroo-tha)

Tomatoes, onions, green peppers and green chilis are diced and mixed into a sauce used to flavor many foods.

salsa de tomotillo (sahl-sak thek tok-mah-tee-yoh)

Green ground tomatoes, almonds, green chili, and broth are flavored with fresh coriander.

salsa de chili rojo (sahl-sah thee chee-leh rrroh-hoh)

This is a sauce made from mild red peppers. Oranges, Jicama (a root vegetable that tastes like water chestnut) fresh corn, eggplant, and green beans are also frequently used. Fruits and leaf pods of the prickly pear cactus are sometimes used in salads or desserts.

BREAD GROUP

tortillas de maiz (tor-tee-yahs deh mah-ees)

Corn which has been soaked in lime water is dried and then ground into flour. It is then mixed with water, shaped into balls and rolled or pressed in a press into shape. They are baked on an ungreased griddle. Sometimes they are fried in fat.

tortillas de harina (tor-tee-yahs deh rh-ree-nah)

Flour, lard and water are mixed, shaped into large thin (1/16") circles and baked on an ungreased griddle.

*tamole (tah-mah-lee)

Corn flour, water and fat are made into a soft dough which is shaped in corn husk or waxed paper. A filling of meat, fruit or carmel and nuts may be added. The filled husk is then folded and placed in a steamer. They are steamed until the dough is firm.

sopaipellas (soh-paee-pee-yas)

A baking powder biscuit dough that is rolled quite thin and deep fat fried; often served with butter or honey.

bunelos (boo-nyue-los)

A baking powder biscuit dough that is rolled into very thin circles with a hole in the center. After frying they are glazed or coated with cinnamon and sugar.

sopa seca de arroz (soh-pah seh-kah theh ah-rros)

Rice is cooked in chicken broth with onion, garlic, chili, tomato, bits of meats such as ham, shrimp, or eggs may be added.

MEAT GROUP

*arroz can pollo (ah-rrros kohw-poh-yoh)

A casserole of rice and pieces of chicken flavored with tomatoes.

*chilis rellenos (chee-leh rrreh-yek-nos)

Green chilis are stuffed with cheese, beans, nuts or meat mixture, coated with egg batter and deep fat fried. Sometimes a mild tomato sauce is used as topping.

chorizo (choh-ree-soh)

Pork sausage seasoned with chili, garlic, pimentos, vinegar, cumin, black pepper and tequila. They may be mild or pungent.

*tostados (tohs tah-tas)

Tacos filled with refried beans, cheese, lettuce. Chili sauce may be added.

enchilados (en-chee-la-thas)

Tortillas are softened in deep fat, dipped in grean or red chili sauce, filled with shredded meat, poultry or cheese, onions, refried beans, hard cooked eggs, guaconoll, sour cream. Enrolladas is ground beef.

*huevos rancheros (weh-vohs rrran-che-rohs)

Corn tortillas are topped with fried eggs, and tomato-chili sauce. Avocado slices may be used as a garnish. Refried beans are usually used as a side dish.

mole de guayolote (moh-leh theh gua-hoh-loh-tek)

Cooked turkey or chicken is heated in a spicy gravy which is seasoned with onions, garlic, raisins, anise, coriander, cumin, cloves, tomato sauce, chilis, sesame seeds, and peanut butter. Sometimes crumbled tortillas are used to thicken the mixture.

*tacos (tah-kos)

The word taco means a snack. It is a crisp fried tortilla meat garnish sauce sandwich. Either wheat or corn tortilla may be used. Ground beef, pork sausage, and diced or shredded pork and chicken may be used as filling. Garnishes are varied. Lettuce, cheese, raddish, tomato, green onions, ripe olives are used as garnishes.

trojoles refritos (free-hoh-less rrek-free-tohs)

Pinto beans and onions are cooked until very soft. A bacon fat or other fats are mixed into the mashed beans. The mixture is reheated until thick and all fat is absorbed.

CONCEPT: Family food traditions

GENERALIZATION: Superstitions, taboos, and fads are sources of nutritional misinformation which may cause health problems.

BEHAVIORAL OBJECTIVE: The student will analyze newspaper articles about food and be able to distinguish food facts from food misinformation.

* *

--Copies of newspaper (attached)

--*"Foods Fads, Foodlore and Fallacies"* (teacher reference)
Cooperative Extension Service
North Dakota State University
Fargo, ND 58102

"Natural, Organic, and Health Foods" (teacher reference)
Mary Darling
Agricultural Extension Service
University of Minnesota
St. Paul, MN 55101
(This is available through your County Extension Office.)

"The Food Fad Boom" (teacher reference)
FDA Consumer
December 1973-January 1974
DHEW Publication Number (FDA) 1 74-2019
U.S. Government Printing Office
Washington, D.C. 20250
Available at FDA Office in Minneapolis

THE NUTS AMONG THE BERRIES (teacher reference - also suitable to read to or be read by students)
Ronald Deutsch
Ballantine Books, Inc.
101 Fifth Avenue
New York, NY 10003

--Duplicate copies of newspapers for each student. Read and discuss the newspaper articles. Make sure everyone understands the information is based on such things as superstition, fads, or taboos, and is neither fact nor truthful.

Discuss other food superstitutions and fads with the children, e.g. grape juice will prevent cancer, alfalfa tea cures arthritis.

Direct student in writing newspaper articles about a food fad in the space provided in their copy of "Old Diners News" and discuss fads.

--Read "Old Diners News." Discuss food fads. Write newspaper article for "Old Diners News."

✱OLD DINERS NEWS

Nutrition Week FREE

FOOD SECTION I

✱ WOULD YOU BELIEVE???

A recent survey uncovered many food traditions. Some traditions are useful. There are many ways to follow the Basic Four Guide. Some people have beliefs that are not proven. Some of these beliefs are written as truth. People who do what the article says are disappointed when the advise does not work. Sometimes they become sicker by waiting for the magic to work rather than seeing a physician. They usually waste money by buying foods they will not use.

TIRED OF GETTING COLDS?

New York - Garlic has been a medicine for centuries. People who wear a small piece of garlic in a bag around their necks noticed they never got a cold. Some other people found it works better if they put a piece under their tongues. Garlic costs so little for so much protection.

VITAMINS GIVE PEP

San Francisco - Vitamins give more pep and energy than other foods. In fact, three vitamins each day, gives so much pep and energy that other foods do not have to be eaten.

A QUICK WAY TO LOSE WEIGHT

Eating celery and grapefruit will make extra body fat melt. Then you can eat all of the other foods you feel like and still lose weight.

BREAD CRUSTS AID APPEARANCE

St. Paul - Sometimes the magic in bread crusts will curl hair, make cheeks rosy, and improve appearance. Eat every piece of crust and good looks will be yours!

DOCTOR FINDS CURE

Maine - Dr. Jones from Bangor says all his patients got well, even those who were very sick. He taught them to drink a mixture of honey and vinegar three times a day. This is the recipe for his medicine: one cup of honey and vinegar made from apples, are mixed together. Put a big spoonful in warm water and drink it right away. It seems so easy to stay well this way.

FOOD FAD STORMS HOMETOWN

CONCEPT: Controlling bacterial growth to keep foods safe temporarily

GENERALIZATION: There are proven methods of storage and handling that must be followed in order to keep foods safe from the effects of harmful bacteria and safe for human consumption.

BEHAVIORAL OBJECTIVE: The student will be able to write the accepted methods used for controlling bacteria in foods on a thermometer marked with the temperature zones.

* * * * * * * * * * * * * * * * * * *

-Learning packet (attached)
A set of activity sheets for each student

-*"Can Your Kitchen Stand the Food Storage Test?"*
F.D.A. Consumer, March 1974
F.D.A. Consumer Affairs Office
240 Hennepin Avenue
Minneapolis, MN 55401

"Food Safety in the Kitchen"
Public Health Service
Food and Drug Administration
5600 Fischer Lane
Rockville, MD 20852

"Safe Handling of Foods in the Home"
Madean Horner
F.D.A. Consumer Affairs Office
240 Hennepin Avenue
Minneapolis, MN 55401

--Duplicate materials in learning packet.

Place in activity or learning center. Materials are self-correcting.

--Follow the procedure listed in the four steps of the learning packet.

Check responses by using the keys provided.

LEARNING ACTIVITIES FOR A LESSON ABOUT BACTERIA

Step 1 ✸ Take the pre-test to see how much you already know about bacteria. Check your answers with the key.

Step 2 ✸ Read about Mr. Allen's visit to the fifth grade class. He showed the boys and girls some pictures and asked for their answers to some questions about the pictures. Look at the pictures and answer the questions. Check your answers by reading the story about Mr. Allen's visit and using the clues which are in the packet.

Step 3 ✸ Do the Word-O-Gram for more information.

Step 4 ✸ This step is an important part of this lesson. When you have completed the activities in this packet, you will be able to write at least 12 methods which can be used to keep foods safe to eat.

When you can do this correctly, you will have completed the packet. You will know how to keep food free from harmful bacteria so it will be safe to eat

STEP 1✸

HOW MANY CAN YOU ANSWER CORRECTLY: IF THE STATEMENT IS TRUE, CIRCLE THE T. IF IT IS FALSE, CIRCLE THE F.

T F 1. Germ is the name given to harmful bacteria.

T F 2. All bacteria are germs.

T F 3. Hot foods must be cooled completely before storing in the refrigerator.

T F 4. All bacteria need food, water, and a warm place to grow.

T F 5. If you are serving food hot, it must be 140°.

T F 6. Freezing kills the growth of bacteria completely so that it cannot start to grow again when the food thaws.

T F 7. Thaw frozen poultry at room temperature.

T F 8. Foods kept longer than two hours at room temperature may not be safe to eat.

✸The right answers to that test are 1-T, 2-T, 3-F, 4-T, 5-T, 6-F, 7-F, 8-T.

STEP 2✸

The fifth grade class had a visitor one day. It was Mr. Allen who is a sanitarian. Many of the boys and girls did not know what a sanitarian did. They were surprised to learn that his job was to keep people healthy. He showed the class this picture and asked if they could guess what was wrong with the man.

•What do you think is wrong?

Sometimes when people become sick with a headache, upset stomach, and fever, the illness might be the flu. Mr. Allen told them sometimes the same feelings can be caused by eating foods which are not safe.

Mr. Allen wanted the boys and girls to think of some ways that food could become unsafe for eating. To give them some clues he showed them this picture. Circle and label 18 things that happened in this kitchen which might contaminate food.

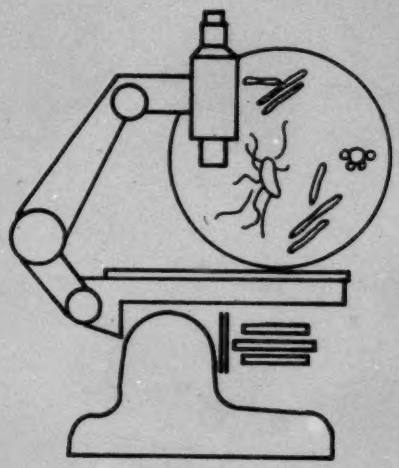
*These are the 18 ways the picture shows foods being contaminated.

1. Sneezing
2. Messy hair
3. Dirty hands
4. Dirty fingernails
5. Dirty apron
6. Uncovered cake
7. Dirty glass
8. Cracked glass
9. Table top with spilled food
10. Dirty cutting board
11. Dirty floor
12. Cat in kitchen
13. Cat needs its own dish
14. Flies and insects
15. Dirty can opener
16. Uncovered bread
17. Dirty towel
18. Foods left out of refrigerator

STEP 3*

Mr. Allen told the fifth grade boys and girls a little bit about bacteria. The class was interested to learn that most bacteria are not harmful. The harmful bacteria are called germs. It is the germs in food which make people sick. Unless these germs have food, water, and a warm place to grow, they won't cause any trouble. When food is frozen the germs are not killed, but they don't grow until thawed. That is why there are special rules for thawing frozen foods before using.

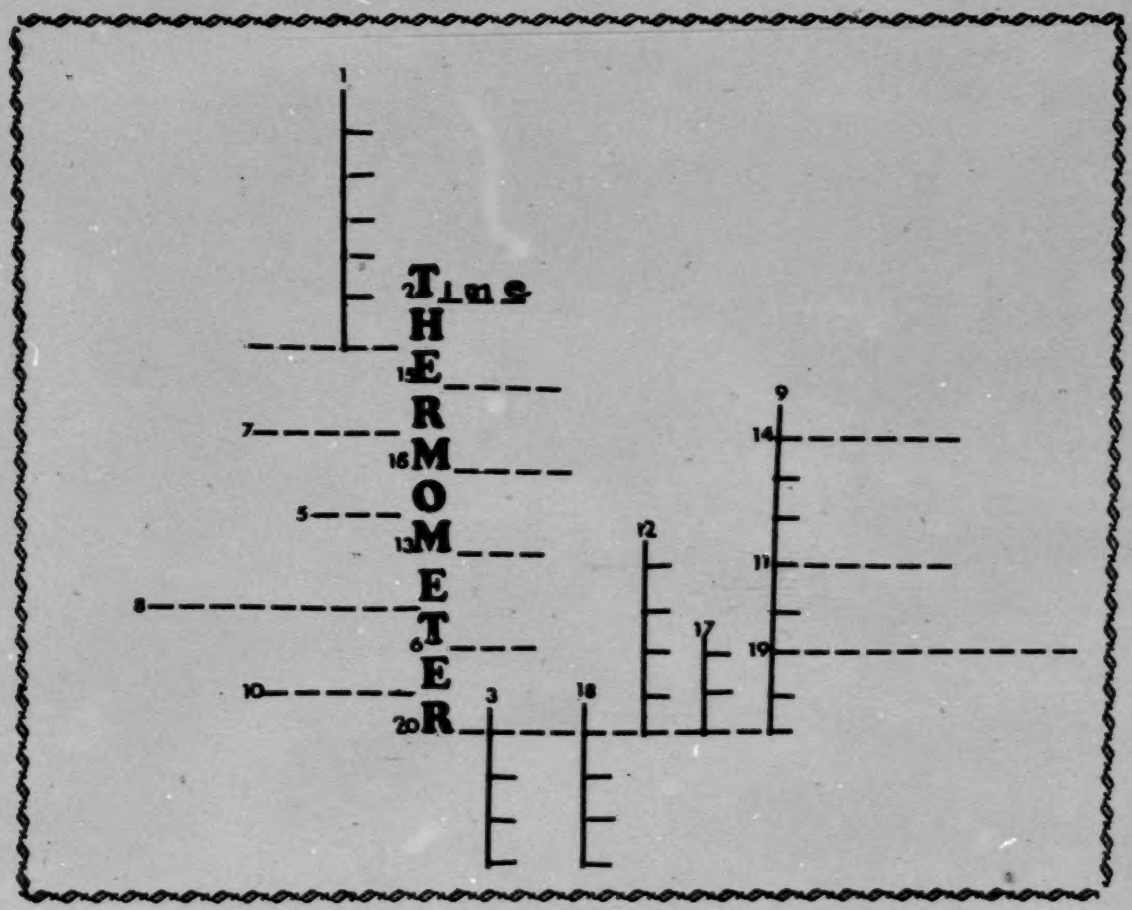
Bacteria cannot be seen without a microscope because they are so tiny. Mr. Allen showed the boys and girls a drawing of some harmful bacteria found in foods. These must be controlled so food is safe to eat.



In addition to the pictures and discussion with Mr. Allen, the fifth grade class learned about special rules that control germs. The Word-O-Gram will tell you about these rules too. In the Word-O-Gram some words will go across and some of them will go down.

TWENTY MORE WAYS TO KEEP FOOD SAFE

*Can you match the key words in these sentences with this WORD-O-GRAM?



1. Don't be a victim of food poisoning.
2. Bacteria grow quickly; they don't need much time.
3. Bacteria need three things to grow: water, warmth, and food.
4. Refrigerators set at 40°F take away most of the warmth from cooked food.
5. Setting a freezer below zero degrees slows the growth of bacteria; it does not kill bacteria.
6. Thaw frozen foods in the refrigerator so bacteria doesn't have a chance to grow.
7. Take foods to a picnic in a cooler so bacteria won't grow in the hot sun.
8. When you buy perishable foods take them home and put them in the refrigerator right away.
9. Put left-over foods in the refrigerator right away.
10. Bacteria double their numbers every 15 minutes at room temperature.
11. Use a thermometer to tell when turkey is cooked completely.
12. Cover foods to protect them.
13. Bacteria like to grow in foods made with warm milk.
14. Follow the directions on frozen food labels.
15. Don't use cracked eggs, they may be contaminated.
16. Canning meats and vegetables at home requires a lot of heat; use a pressure cooker to kill all the bacteria.
17. Keep hot foods really HOT (140°F) while serving.
18. Harmful bacteria are called germs.
19. Boil home canned vegetables and meats before tasting.
20. We can thank the refrigerator for helping to keep us healthy.

*KEY WORDS FOR THE WORD–O–GRAM ARE:

1. victim	6. thaw	11. turkey	16. meat
2. time	7. cooler	12. cover	17. hot
3. food	8. perishables	13. milk	18. germs
4. warmth	9. left-over	14. labels	19. vegetables
5. zero	10. double	15. eggs	20. refrigerator

FOOD SAFETY THERMOMETER

STEP 4

Mr. Allen brought a food safety thermometer like the one on this page to show the class. He asked them to tell him at what temperatures bacteria live and grow best.

*If Mr. Allen asked you about the temperatures at which bacteria live and grow how would you answer him?. . . . . .

*Do you know what temperature will kill bacteria?. . . . . .

* What temperature slows bacterial growth but does not kill bacteria?. . . . . .

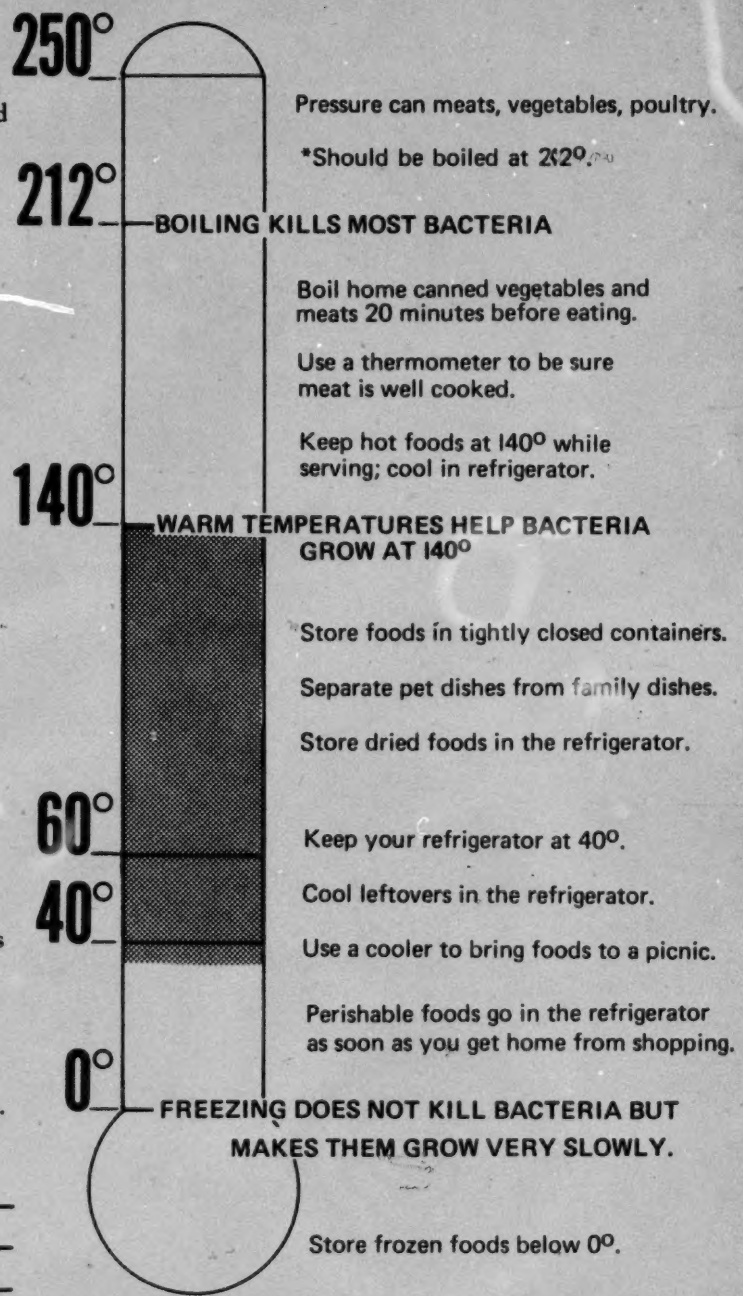
Mr. Allen said room temperatures were dangerous. He asked if the boys and girls knew why. * What would your answer be?

_____

_____

_____

_____

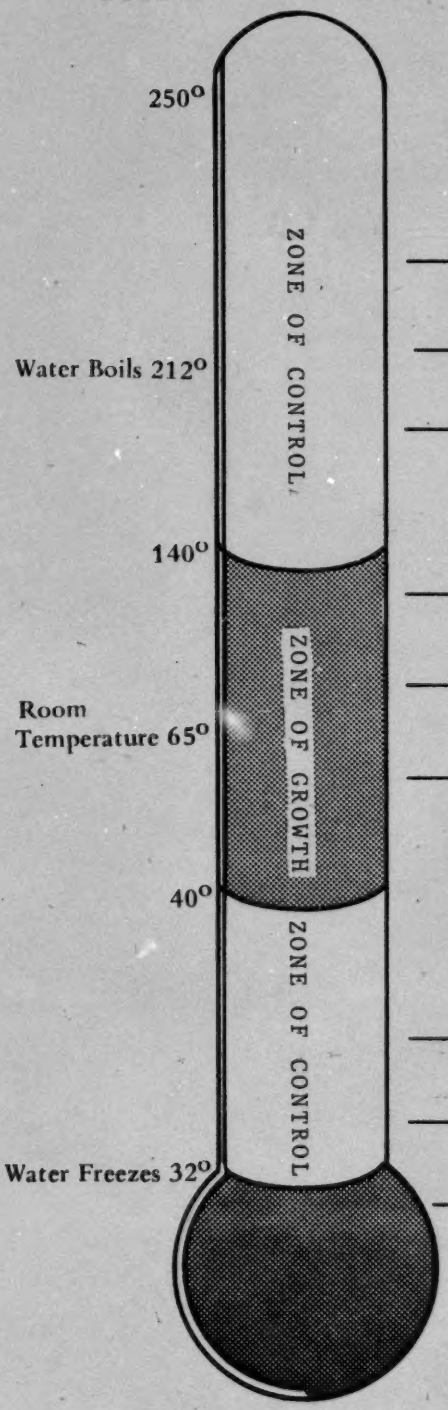

250°
Pressure can meats, vegetables, poultry.
*Should be boiled at 212°.
212°
BOILING KILLS MOST BACTERIA
Boil home canned vegetables and meats 20 minutes before eating.
Use a thermometer to be sure meat is well cooked.
Keep hot foods at 140° while serving; cool in refrigerator.
140°
WARM TEMPERATURES HELP BACTERIA GROW AT 140°
Store foods in tightly closed containers.
Separate pet dishes from family dishes.
Store dried foods in the refrigerator.
60°
Keep your refrigerator at 40°.
40°
Cool leftovers in the refrigerator.
Use a cooler to bring foods to a picnic.
Perishable foods go in the refrigerator as soon as you get home from shopping.
0°
FREEZING DOES NOT KILL BACTERIA BUT MAKES THEM GROW VERY SLOWLY.
Store frozen foods below 0°.

5-26

Mr. Allen explained what to do at each temperature to keep food safe. After Mr. Allen left, the boys and girls put his thermometer away and made a thermometer of their own.

They filled in three things that they could do at each temperature zone to keep foods safe. •See if you can think of nine ways to keep food safe. Write them on the lines beside the thermometer.

FOOD SAFETY THERMOMETER



CONCEPT: Affecting dental health through nutrition

GENERALIZATION: Snacks as supplements to balanced diets do not have to have added sugar as the practice of eating this type of snacks contributes to a life-time of dental decay.

BEHAVIORAL OBJECTIVE: The student will select snack foods which are sugar free or relatively low in added sugar to be displayed in an arrangement of the student's choice for entering in a class Low Sugar Snack Contest.

* * * * * * * * * * * * * * * * * *

--Snack food pictures, packages, or labels with listed ingredients.
Ribbons for awards: Blue - first place; Red - second place; Yellow - third place; White - fourth place

--*"Break the Chain of Tooth Decay"*
American Dental Association
211 East Chicago Avenue
Chicago, IL 60611

"Diet and Dental Health" (pamphlet -- teacher reference)
American Dental Association
211 East Chicago Avenue
Chicago, IL 60611

"Nutrition and Dental Health" (pamphlet -- teacher reference)
National Institute of Dental Research
National Institute of Health
Bethesda, MD 20014

--Announce a Low Sugar Snack poster contest.

Several days before the contest ask students to begin a collection of snack food pictures, packages, labels. These will be entered in the contest.

Discuss the factors which contribute to dental decay. Compile a list of some rules governing the eating of sweets.

Contest rules: Low sugar snack pictures collected will be arranged in a display of the students design. The poster which has the most sugar free or low added sugar snacks displayed in the most original manner will win the Blue Ribbon. Red -- second largest number, etc. If anyone is able to produce an especially unusual display of all sugar free snacks a purple ribbon could be awarded.

Form student committees to: (1) Collect completed displays, (2) Arrange the displays, (3) Judge the displays according to above criteria, (4) Make the awards.

-Take part in discussion about factors contributing to dental decay. Compile and display rules governing eating of sweets. Collect snack food pictures, packages, labels. Make poster for Low Sugar Snack Contest. Judge entries and award ribbons.

BACKGROUND INFORMATION

Snack foods considered good choices include:

fresh fruits and vegetables like carrot sticks, celery, cauliflower, etc.
cheese
hard cooked eggs
nuts
peanut butter
potato chips
popcorn
pretzels
bread
instant soups

Those containing added sugar include:

candies
soft drinks
cookies
cakes
pies
jello

When reading the label, if sugar or sucrose as an ingredient is listed first or high on the list of ingredients, count these foods as poor choices for the contest.

When compiling the rules governing eating sweets tell the students the important thing to remember is that it is better to eat all the sweets with added sugar they intend to eat for a day at the same time and then brush their teeth immediately afterwards.

CONCEPT: Effect of advertising on food choices

GENERALIZATION: Advertisements which sell food products are most effective when they are strategically placed and appeal to the intended buyers.

BEHAVIORAL OBJECTIVE: The student will conduct a survey in school to determine the effectiveness of an advertisement planned to familiarize the students with a certain food.

* *

--Survey question
Endive (other uncommon food)
Recipe (attached)
Materials for making bulletin board and posters

--*ADVERTISING*
George Allen Foster
Criterion Books, NY

--Explain to the students that they are going to plan and conduct an advertising campaign. Ask them what advertising does; when and why it is used. Tell them that in order to learn whether their campaign is successful or not they will need to conduct a survey.

The survey group can be the entire school or one classroom other than your own. Get permission from the principal (if entire school) or teacher of the classroom to be used.

Choose as the product to be advertised an unfamiliar vegetable such as endive. The vegetable should be a good source of Vitamin A -- a dark green or yellow vegetable.

Ask students in your own class if they are familiar with endive: How many have tasted it? How it can be prepared? Emphasize that it is a good source of vitamins and iron.

Survey the study group to find out how many students can answer the question "What is endive?" Count the number out of the total number in the group who correctly identify the food. This can also be changed to a percentage if your class (or some students) would like to.

Help the students plan an advertising campaign for endive. Use posters, bulletin boards, public address announcements, free samples could be used too. Make the campaign fairly conspicuous.

After a few days conduct a second survey among the study group but ask the question of different students than those asked the first time. Use the same question ("What is endive?") and the same number of students. Again count the correct responses. (Change to percentage if it was done in the first survey.) Ask the students if the advertising campaign made more of the students able to identify the food. Was the campaign a success? Does advertising make people more aware?

--Conduct first survey.
Compile results.
Plan advertising campaign.
Participate in developing and conducting advertising campaign.
Conduct second survey.
Compile results, and determine whether or not advertising is an effective way to tell others about a food product.

ADDITIONAL ACTIVITY: Make a salad using endive. Ask the school lunch cook to serve the same salad one day.

BACKGROUND INFORMATION

This lesson is a subtle way to teach Vitamin A sources. Other vegetables might be substituted for endive in successive years. To be an appropriate substitution, the food should be an excellent source of Vitamin A (at least 600 international units per average serving) and be unfamiliar to a majority of the students.

Greens such as romaine, swiss chard, escarole, mustard greens, dandelion greens, beet greans, water cress, turnip greens, and leaf lettuce may be used. Other vegetables such as brussel sprouts, broccoli, asparagus and yams might also be used. If possible, the vegetable could be served in the school lunch program.

If a green is chosen, a simple salad might be prepared. Washing the green, tearing it into bite size pieces is all the preparation needed. One way to be able to taste a new flavor is to serve it as is, to be dipped in a variety of dressings.

When preparing the greens for use, sanitary procedures could be stressed. Washing hands before preparing food or eating, careful washing of greens and using clean dishes to hold food are concepts to be stressed.

RECIPE

Endive Salad

EQUIPMENT

large pail or sink
paper towels
bowl
spoons
paper plates
forks

FOOD

Endive
other greens if desired
salad dressing

Wash endive in COLD water several times.

Drain water from leaves and pat dry with paper towels.

Tear leaves into bite size pieces, discarding thick ribs and wilted or brown parts.

Toss with a simple dressing such as french dressing, available from school lunch.

CONCEPT: Accessibility of various forms of foods produced in Minnesota

GENERALIZATION: Food stuffs produced in Minnesota are available in many different forms in the market places all over the world.

BEHAVIORAL OBJECTIVE: The student will play the Minnesota Market Game to gain an understanding of food production in Minnesota. The student will choose a food produced in Minnesota and prepare a report on the different ways the food is produced and eaten.

* *

--Minnesota Market Game (directions for construction attached)

-*THE GREAT AMERICAN SHOPPING CART*
Ada and Frank Graham, Jr.
Simon and Schuster
New York, NY

--Using the attached directions construct the Minnesota Market Game.

Up to four students may play at one time. See that each student plays the game at least once.

Play a 20 questions game to test the students on knowledge gained from playing the game. (See attached sheet for background information.) You can supervise the game or a group of students may play and be responsible for this.

Tell each student to select one or more of the foods produced in Minnesota. They will do some research to find out how many different ways the same food is eaten, e.g. potatoes -- chips, flour, dehydrated. They will report the results of their research to the class. This could be done as a written report, booklet, poster, tasting samples, bulletin board, etc.

--Play Minnesota Market Game at least once.
Play 20 questions based on Minnesota Food Game.
Choose a food product. Find out how the food is eaten. Report findings to class.

ADDITIONAL ACTIVITIES: Invite the County Extension Agent to speak to the class.

Plan Minnesota Menu Type A school lunch and ask cook to prepare it if possible. Publicize and promote Minnesota Menu school lunch. Invite a school lunch cook to explain the Type A lunch or use a Menu Planning Guide for Type A School Lunches, which is available from your school lunch cook or:

Child Nutrition Section
Department of Education
Capitol Square Building
550 Cedar Street
St. Paul, MN 55101

INFORMATION FOR 20 QUESTIONS GAME

For the 20 Questions Game, questions can be based on the following products grown in the nine Agricultural Districts of Minnesota include:

NORTH CENTRAL DISTRICT
- Wild rice
- Barley
- Fish
- Rye

WEST CENTRAL DISTRICT
- Sugar beets
- Wheat
- Barley
- Rye

SOUTH WEST DISTRICT
- Hogs
- Sheep
- Potatoes
- Soybeans
- Beef cattle

SOUTH EAST DISTRICT
- Apples
- Beef cattle
- Dairy products
- Green peas

SOUTH CENTRAL DISTRICT
- Sweet corn
- Potatoes
- Beef cattle
- Soybeans

NORTH EAST DISTRICT
- Poultry
- Honey
- Fish

EAST CENTRAL DISTRICT
- Onions
- Cabbage
- Carrots

NORTH WEST DISTRICT
- Sunflowers
- Potatoes
- Sugar beets
- Wheat
- Oats

CENTRAL DISTRICT
- Poultry
- Turkey
- Pork
- Dairy products
- Sweet corn
- Green peas

To find ways the food products are eaten, suggest the students check food labels, look in seed catalogs, interview farmers in the area, check with county extension agents, use encyclopedias.

DIRECTIONS FOR CONSTRUCTING MINNESOTA MARKET GAME

TO ASSEMBLE GAME YOU WILL NEED:

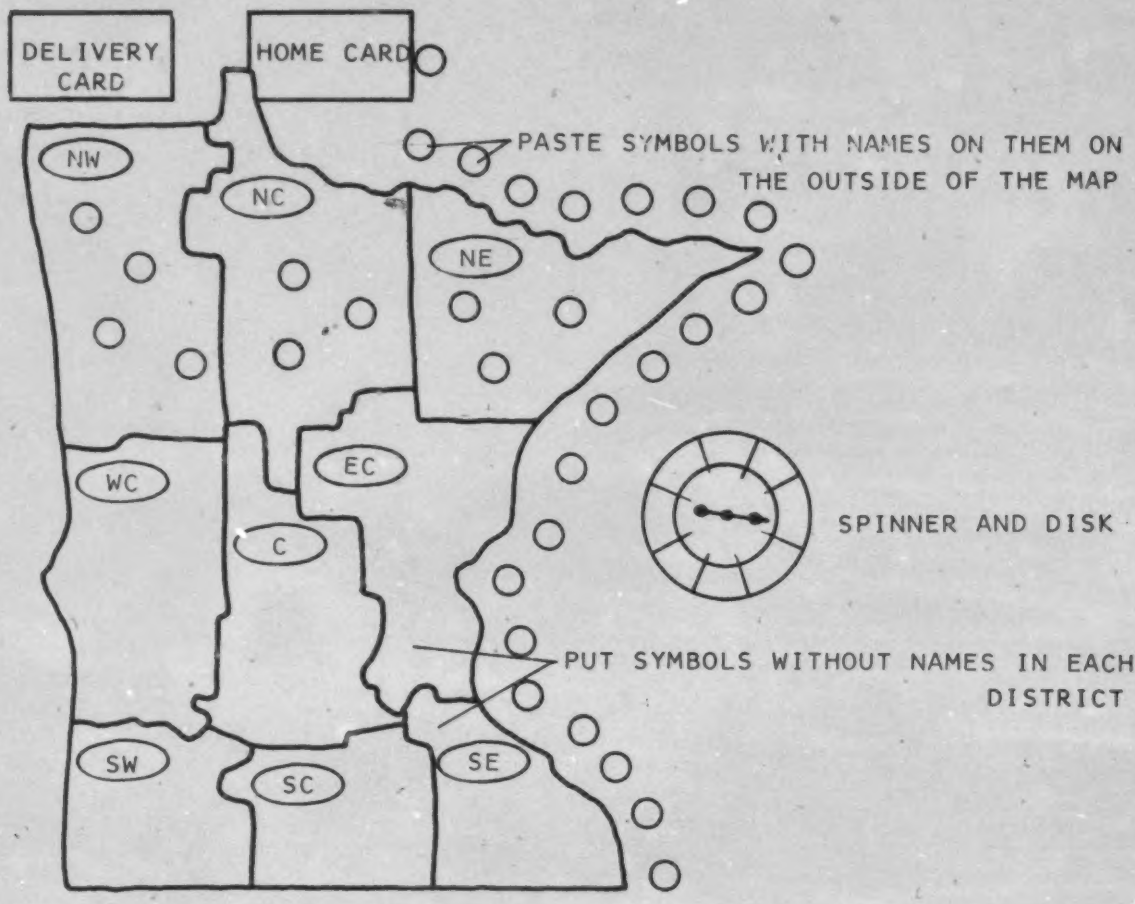
1 Sheet colored tag board 28" x 44"
1 Official Minnesota Highway Map
9 Copies of district outlines (attached)
2 Sets of Delivery Cards (attached)
2 Sets of Home Cards (attached)
Money (attached)
4 Player Mats (attached)
4 Small toy trucks -- each in a different color, e.g. matchbox size
2 Disks the same colors as each truck (e.g. paper key tags colored to match trucks)

1 Copy Title Page (attached)
Duplicate copies of Game Directions page
Pointer and base circle (attached)
1 Paper fastener

STEP I Cut highway map on boundary lines.
Paste map on center of tag board.

STEP II Cut pieces from Title Page. Paste to tag board. Cut district boundaries out. Paste on map -- fitting together like puzzle pieces. District boundaries should follow county lines. Attach pointer to base circle with paper fastener.

STEP III Cut out money, Home Cards, and Delivery Cards. Paste Home Cards and Delivery Cards to game board. Game is ready to play.



The Minnesota Market Game

*Game symbols adapted from Dreyfuss International Symbol Source Book

✱DIRECTIONS FOR PLAYING MINNESOTA MARKET GAME✱

GETTING READY

Give each player eight $500 and five $100 bills.
Each player chooses a color and takes a Player Mat, a truck, and playing discs of the same color.
Shuffle Home Cards and Delivery Cards. Place face down on game board spaces marked HOME CARD -- DELIVERY CARD.
Each player draws two Home Cards. These cards tell you where your home districts are.
Put a product disc in each of your Home Districts.
Cover the product you want to sell with a disc. Put your truck in one of your Home Card Districts.

PLAYING

Each player spins the pointer. The player with the highest number begins. The others take their turns in clockwise order. Choose the district you want to go to to buy another player's product. Each player in turn moves to the district chosen by spinning the pointer and reading the number of districts they will move on the dark ring. You can move from district to district as long as they share boundaries, but plan to reach your chosen district in the least number of moves.
When you reach the district you have chosen, ask the owner of the products what he wants to sell. The owner names his price by spinning the pointer and reading the price on the light ring. If the player feels this price is too high, he may refuse to buy the product. Another player with an empty truck may buy the product. If no other player wishes to buy the product, then you must buy it and pay the price shown by the pointer. Put the product disc on the truck. Draw a Delivery Card. On the next turn go to the district shown on the Delivery Card.

When your truck and product have reached that district, sell the product back to the player you bought it from. You spin the pointer and read the delivery price in the light ring. The owner must pay you for delivery and he puts the product disc in the corresponding circle outside the state border. That ends your turn.

WINNING

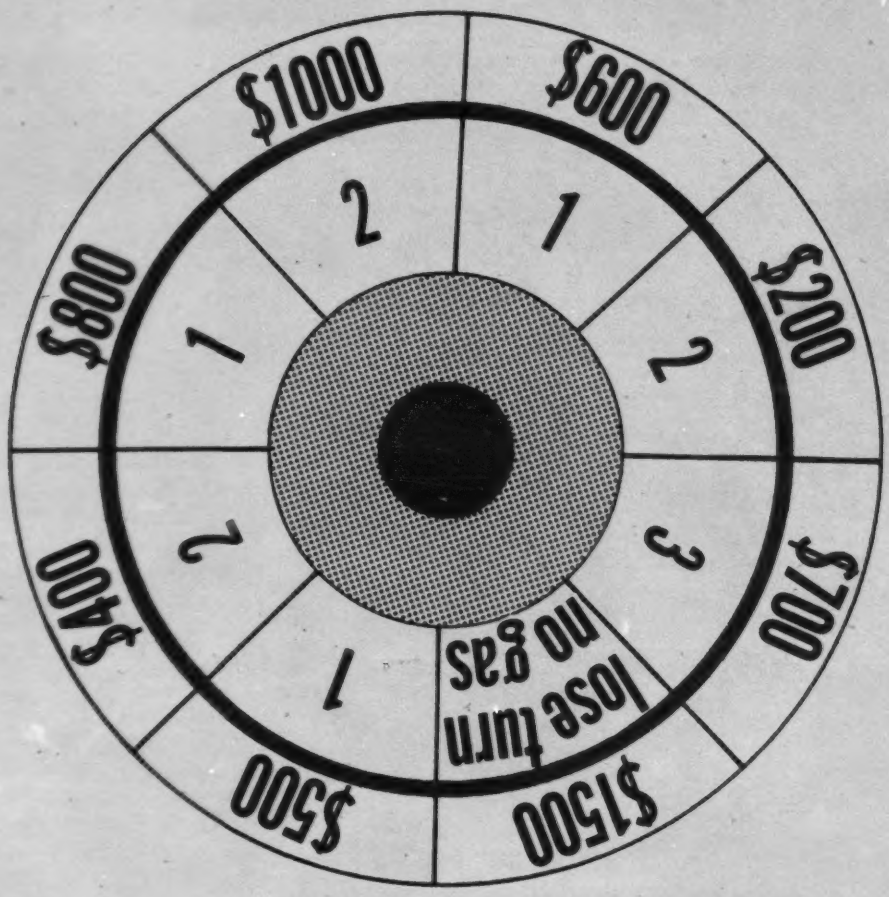
When all products have been sold, count your money. The player with the most money wins.

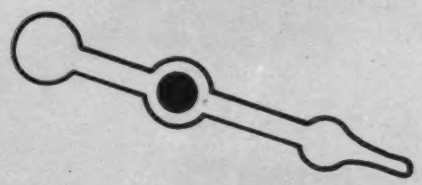
LOSING A TURN

When the pointer stops at no gas, you must stay where you are for one turn.

If you have a product disc on your truck, take the product disc off for that turn. Another player with an empty truck can buy your product for $100 if he lands in the district you are in. He must deliver the product to the district on the Delivery Card that you had drawn.

If only you have product discs on the state map, you can move in turns to your home district, draw a Delivery Card and take the product to that district. When you get to the delivery district, every player must pay you $200.





Cut out:
- -disk
- -pointer
- -black circle in the center of each.

Paste:
- -disk to game board
- -pointer to tag board

Cut pointer out of tag board.
Attach to center of disk with a paper brad.

THE MINNESOTA MARKET

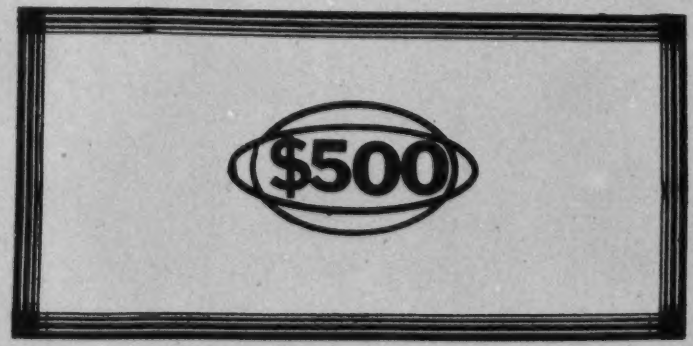
Arrange the cut out circles around the edge of the Minnesota map. Arrange them in the 4 food groups. Cut out the name of the game. Paste it at the bottom of the board.

GAME

OVERLAP

HOME CARD

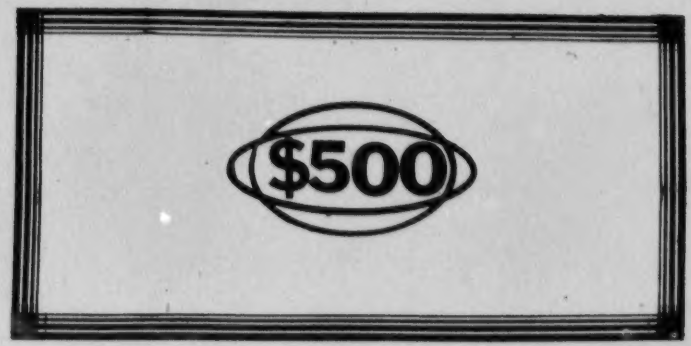
DELIVERY CARD



PLAYER MAT

HOME CARD

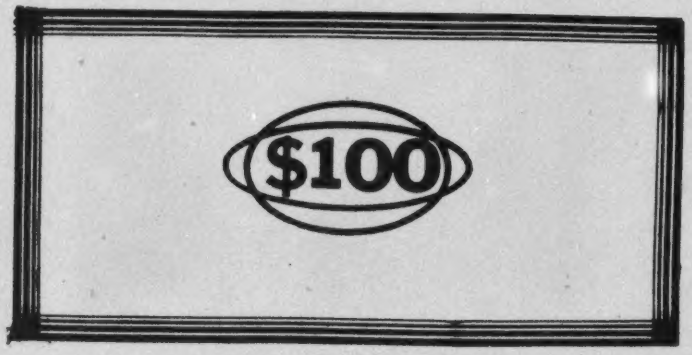
DELIVERY CARD

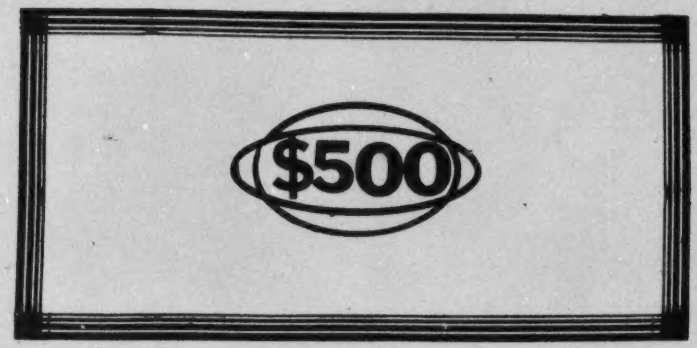


PLAYER MAT

HOME CARD

DELIVERY CARD

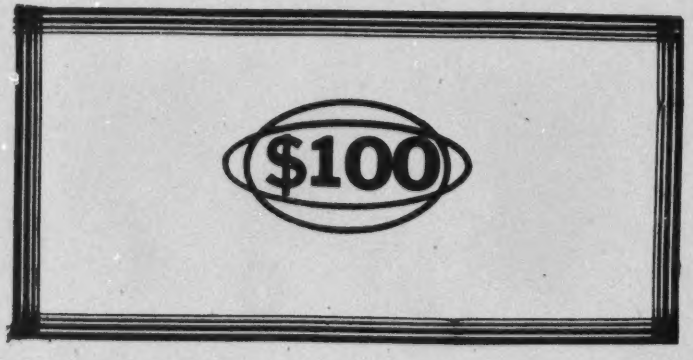


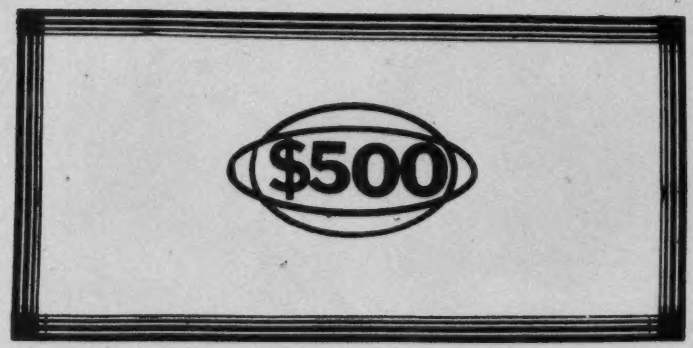


PLAYER MAT

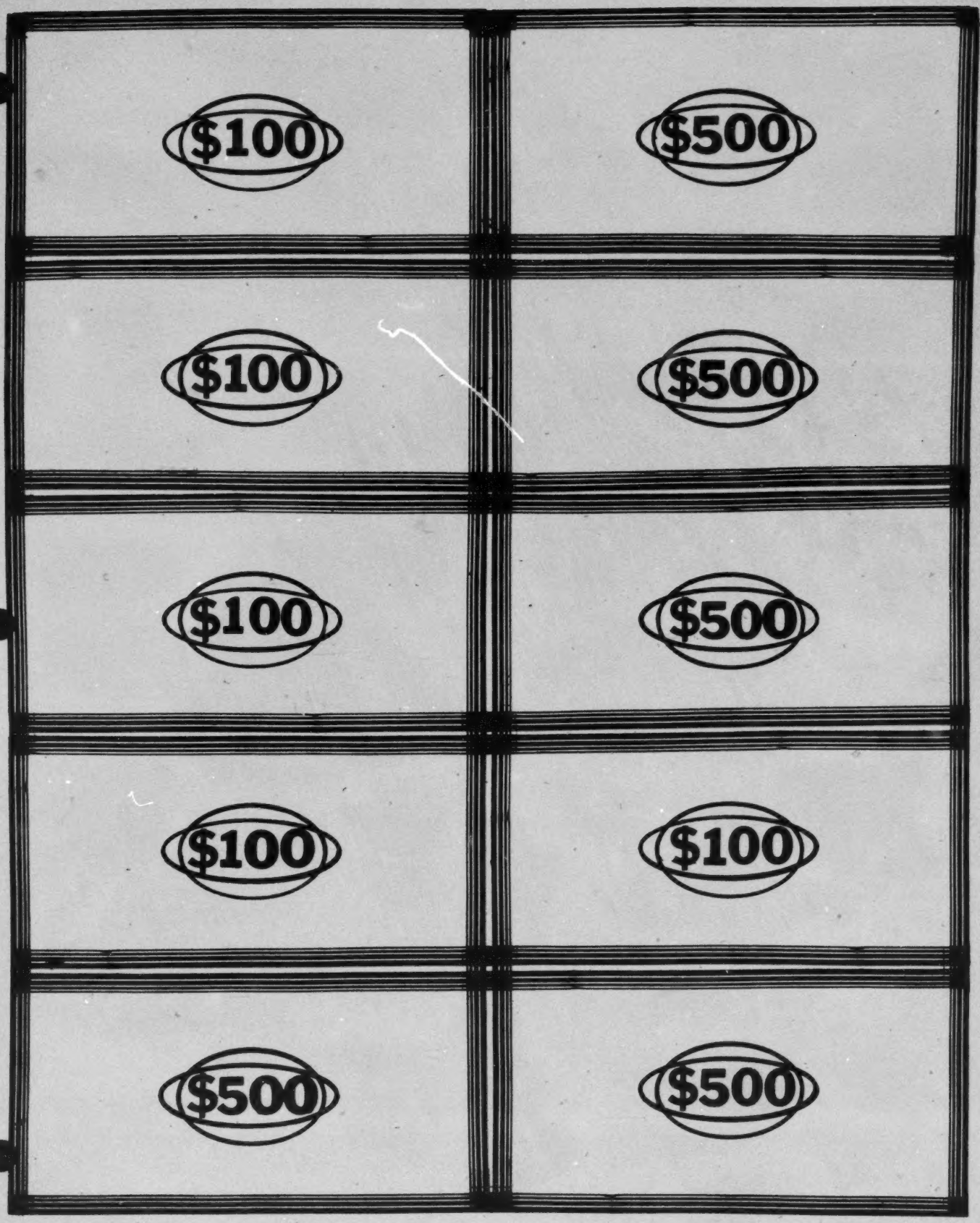
HOME CARD

DELIVERY CARD





PLAYER MAT



Cut out money. Sort into denominations.

Cut out money. Sort into denominations.

5-39

Cut out money. Sort into denominations.

5-39

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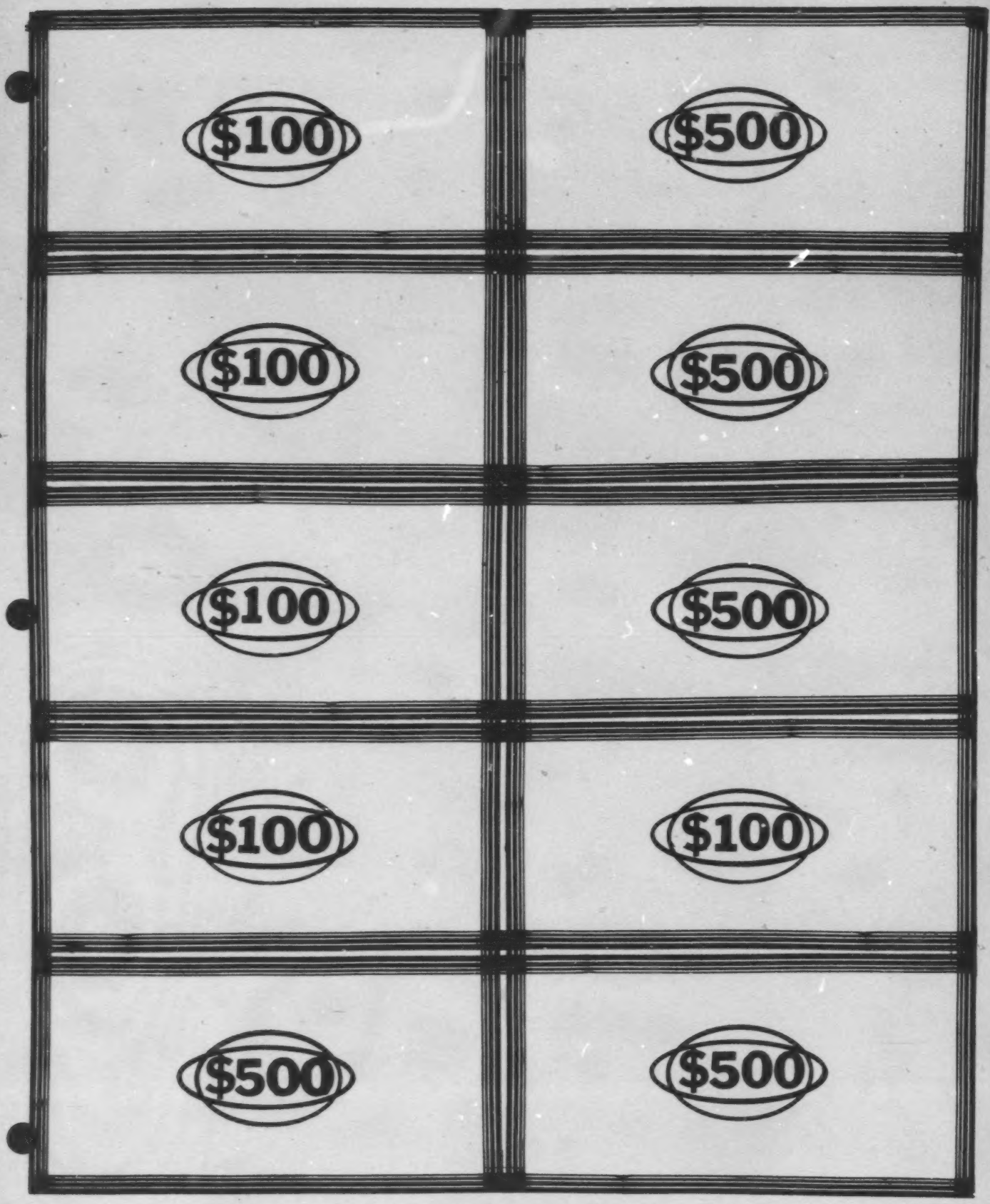
5-39



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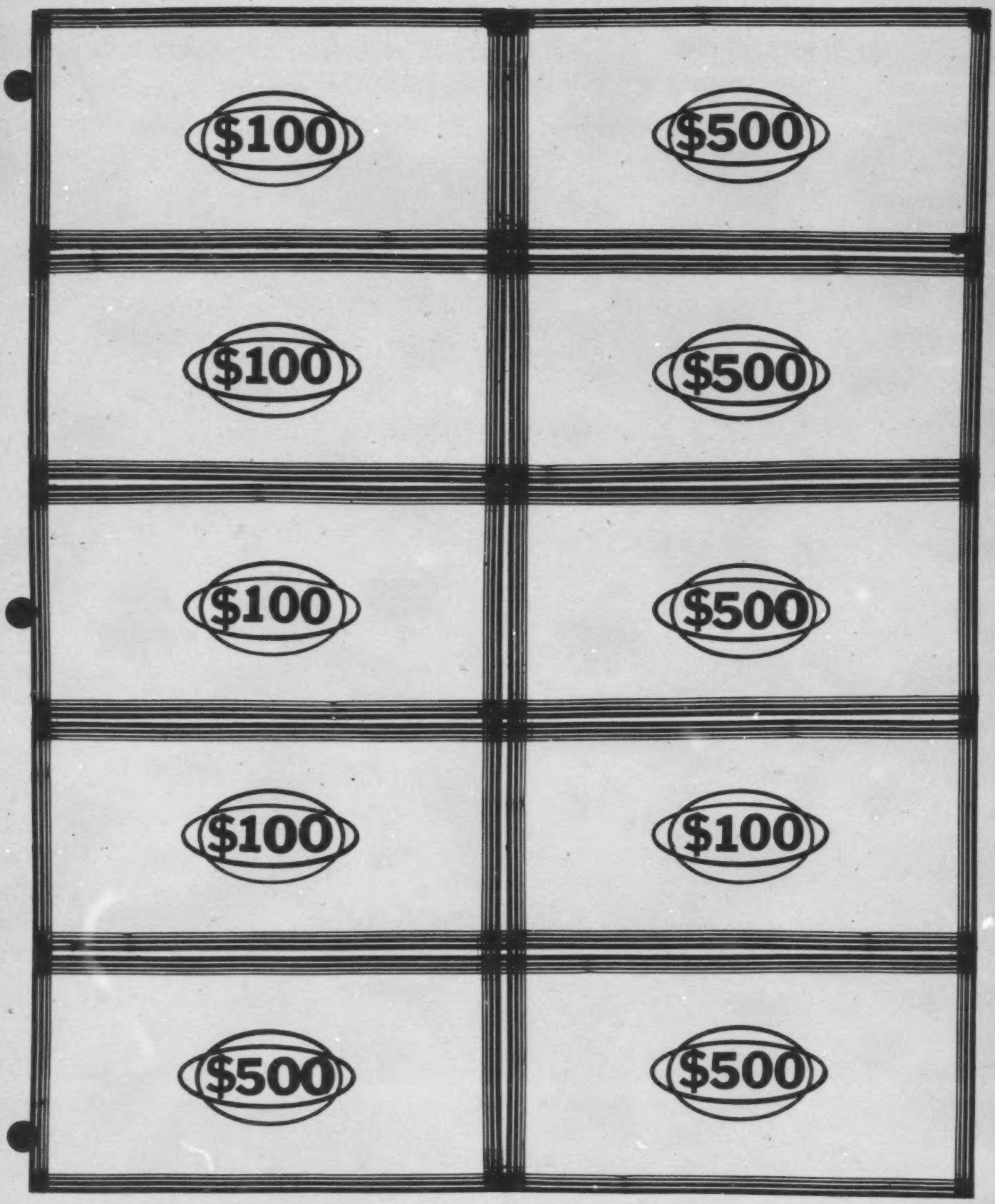

Cut out money. Sort into denominations.

5-39

Cut out money. Sort into denominations.

5-39

WC

WEST CENTRAL DISTRICT

UPPER SIOUX AGENCY MUSEUM

MINNESOTA RIVER VALLEY

INSPIRATION PEAK

347,000 ACRES CULTIVATED

SE

SOUTHEAST DISTRICT

MINNESOTA CAVERNS AND MYSTERY CAVE

LAKE PEPIN

MISSISSIPPI RIVER VALLEY

STEAMBOAT MUSEUM

MAYO-WOOD ESTATE TOUR

389,100 ACRES CULTIVATED

Paste this ■ card to game board.

DELIVERY CARDS

EC

EAST CENTRAL DISTRICT

MILL LACS INDIAN MUSEUM

ST. PAUL-CAPITAL CITY

FORT SNELLING STATE PARK

W.H.C. FOLSUM HOUSE MUSEUM - TAYLOR FALLS

162,800 ACRES CULTIVATED

NC

NORTH CENTRAL DISTRICT

LAKE OF THE WOODS

SMOKEY BEAR STATE PARK

RED LAKE INDIAN RESERVATION

68,000 ACRES CULTIVATED

5-40

WC

WEST CENTRAL DISTRICT

UPPER SIOUX AGENCY MUSEUM

MINNESOTA RIVER VALLEY

INSPIRATION PEAK

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5-40

NW
NORTHWEST DISTRICT

ITASCA STATE PARK
WHITE EARTH INDIAN RESERVATION
RED RIVER OF THE NORTH VALLEY

344,000 Acres Cultivated

NE
NORTHEAST DISTRICT
VOYAGEURS NATIONAL PARK
BOUNDARY WATER CANOE AREA
LAKE SUPERIOR NORTH SHORE DRIVE

4,000 Acres Cultivated

C
CENTRAL DISTRICT

CAMP RIPLEY MILITARY RESERVATION
CHARLES LINDBERG'S BIRTHPLACE/ LITTLE FALLS

587,900 Acres Cultivated

SW
SOUTH WEST DISTRICT
LOWER SIOUX INDIAN AGENCY INTREPRETIVE CENTER
PIPESTONE NATIONAL MONUMENT
BLUE MOUNDS STATE PARK

201,300 Acres Cultivated

SC
SOUTH CENTRAL DISTRICT

W. W. MAYO HOUSE MUSEUM - LE SUEUR
FORT RIDGELY AND SIOUX TRAVERSE STATE PARKS
MINNEOPA FALLS

182,00 Acres Cultivated

5-41

NW
NORTHWEST DISTRICT

ITASCA STATE PARK
WHITE EARTH INDIAN RESERVATION
RED RIVER OF THE NORTH VALLEY

344,000 Acres Cultivated

C
CENTRAL DISTRICT

CAMP RIPLEY MILITARY RESERVATION
CHARLES LINDBERG'S BIRTHPLACE/ LITTLE FALLS

587,900 Acres Cultivated

SC
SOUTH CENTRAL DISTRICT

W. W. MAYO HOUSE MUSEUM - LE SUEUR
FORT RIDGELY AND SIOUX TRAVERSE STATE PARKS
MINNEOPA FALLS
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SOUTH WEST DISTRICT
LOWER SIOUX INDIAN AGENCY INTREPRETIVE CENTER
PIPESTONE NATIONAL MONUMENT
BLUE MOUNDS STATE PARK

201,300 Acres Cultivated

NC
NORTH CENTRAL DISTRICT

BOISE CASCADE PAPER PLANT-INTERNATIONAL FALLS

ROWELL LABORATORIES, INC. - BAUDETTE -
(VITAMIN PILLS)

PAUL BUNYON STATUE - BEMIDJI

Paste this card to game board.

HOME CARDS

WC
WEST CENTRAL DISTRICT

VIKING RUNESTONE IN ALEXANDRIA

MAPLEWOOD STATE PARK IN PELICAN RAPIDS

NW
NORTHWEST DISTRICT

CRYSTAL SUGAR PLANT IN MOORHEAD

SILVERLINE BOAT FACTORY IN MOORHEAD

MINK RANCHES

NE
NORTHEAST DISTRICT

SUPERIOR NATIONAL FOREST

MASABI IRON RANGE

NC
NORTH CENTRAL DISTRICT

BOISE CASCADE PAPER PLANT-INTERNATIONAL FALLS

ROWELL LABORATORIES, INC. - BAUDETTE-
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HOME CARDS

NE
NORTHEAST DISTRICT

SUPERIOR NATIONAL FOREST

MASABI IRON RANGE

EC
EAST CENTRAL DISTRICT

MINING AND SNOWMOBILE MANUFACTURER IN IRONTOWN AND CROSBY, TWIN CITIES OF THE NORTH. HUTTERITE COLONY IN BIG STONE COUNTY.

SC
SOUTH CENTRAL DISTRICT

GREEN GIANT CANNING FACTORY IN LE SUEUR
LIME KILN IN NEW ULM
FARIBAULT WOOLEN MILL

C
CENTRAL DISTRICT

SINCLAIR LEWIS' HOMESTEAD IN SAUK CENTRE
HART PRESS, A PRINTING COMPANY IN LONG PRAIRIE

SW
SOUTHWEST DISTRICT

LAC QUI PARLE RESERVOIR
MARSHALL IS THE TRADE CENTER

SE
SOUTHEAST DISTRICT

ROCHESTER MEDICAL CENTER
RED WING SHOE AND POTTERY FACTORIES

EC
EAST CENTRAL DISTRICT

MINING AND SNOWMOBILE MANUFACTURER IN IRONTOWN AND CROSBY, TWIN CITIES OF THE NORTH. HUTTERITE COLONY IN BIG STONE COUNTY.

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SOUTHWEST DISTRICT

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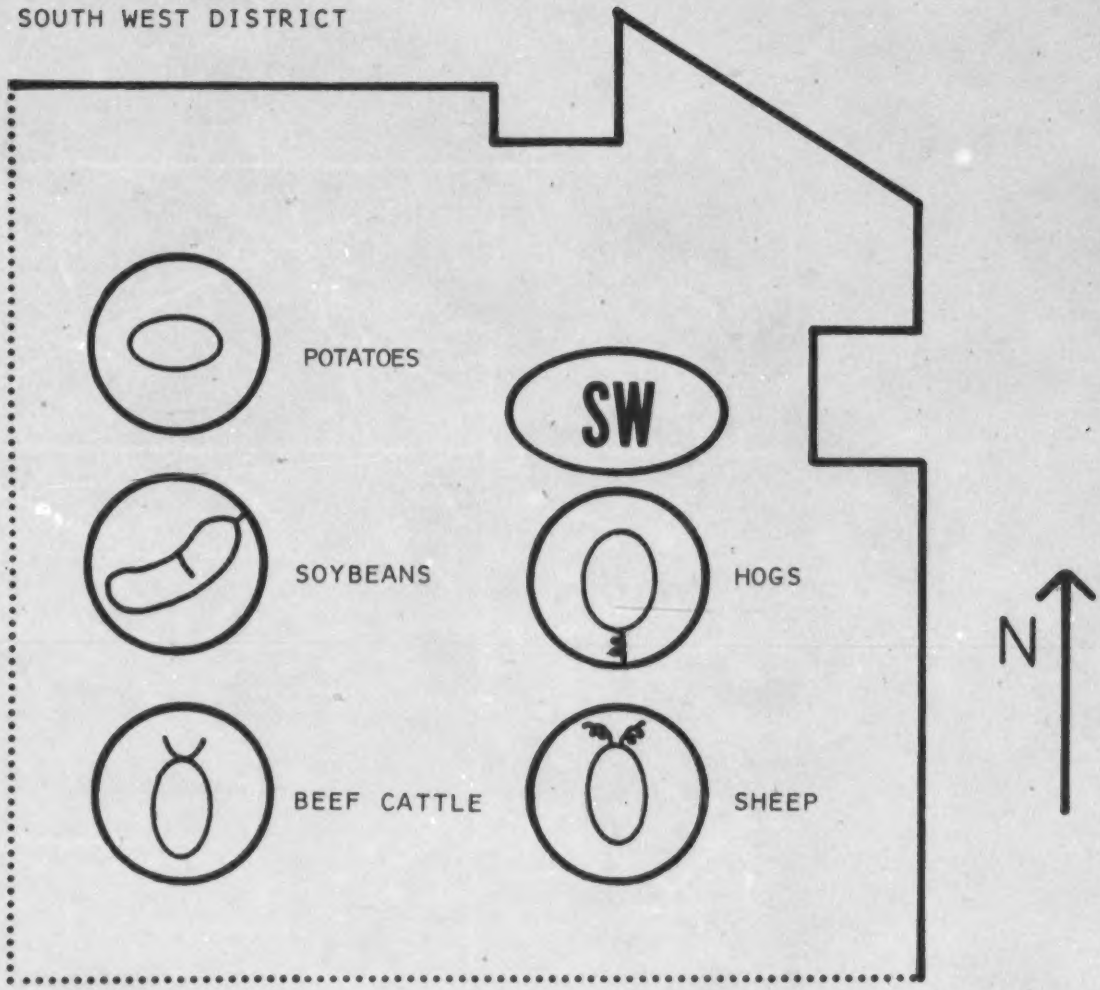
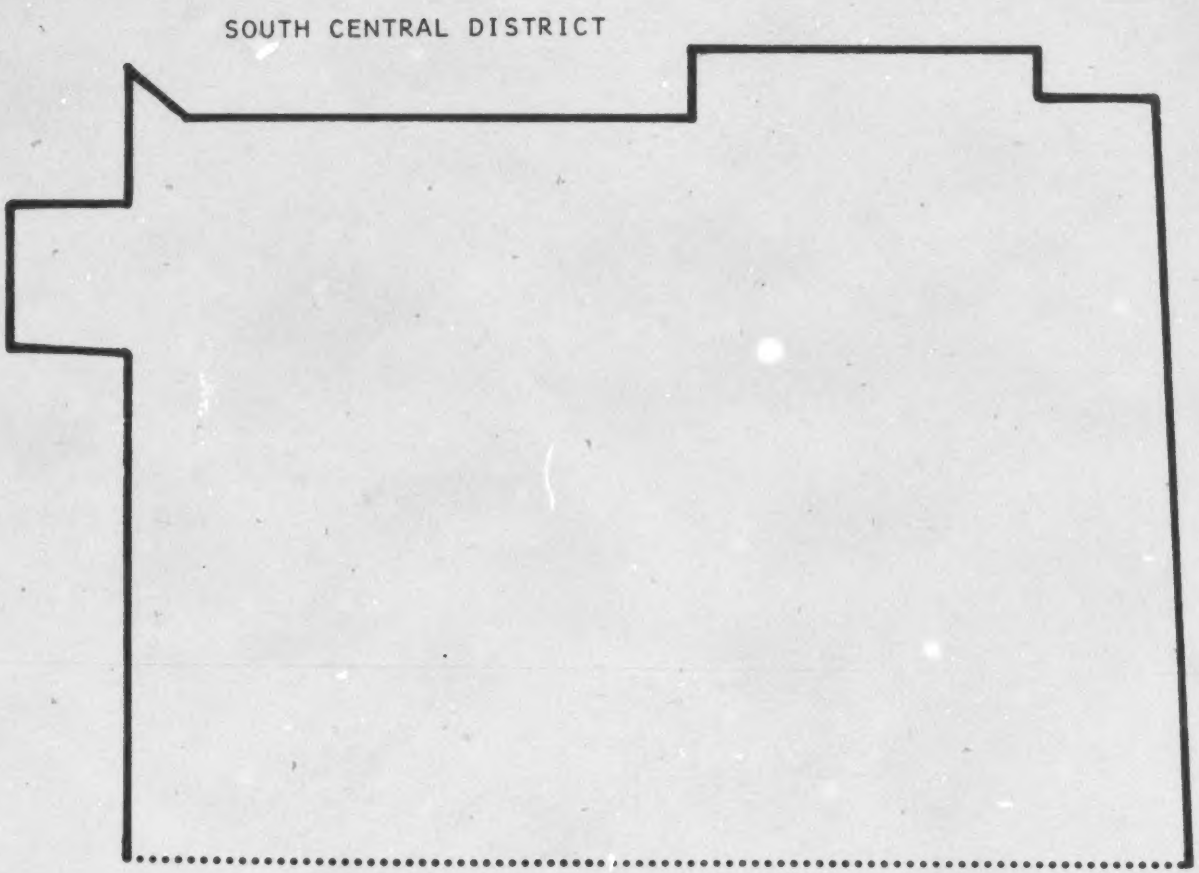
SOUTHEAST DISTRICT

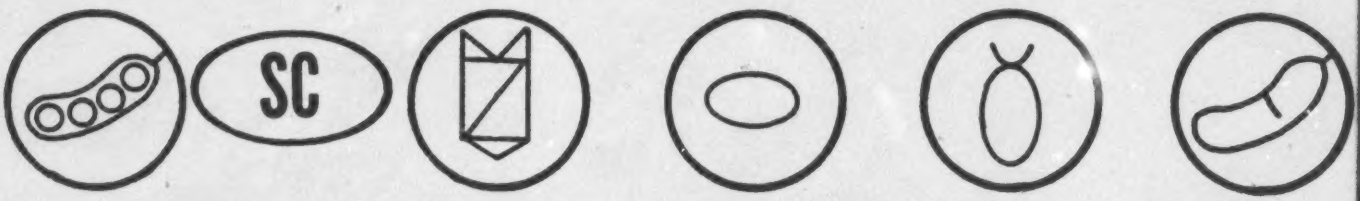
ROCHESTER MEDICAL CENTER
RED WING SHOE AND POTTERY FACTORIES



The shape of each district is on a separate page. You can transfer the district borders to an official Minnesota Highway map in one of two ways. (1) Cut inside the heavy black line, put the piece in the correct position on the map, and trace around the piece with a felt tip marker, or (2) Cut out the heavy black line and paste it on a map. Cut the oval with the district initials and paste it on a map, Cut out the circles, arrange them in the district and paste them down. Be sure not to cover places of interest.

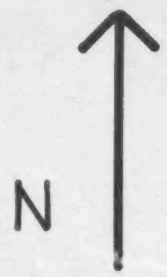
SOUTH CENTRAL DISTRICT

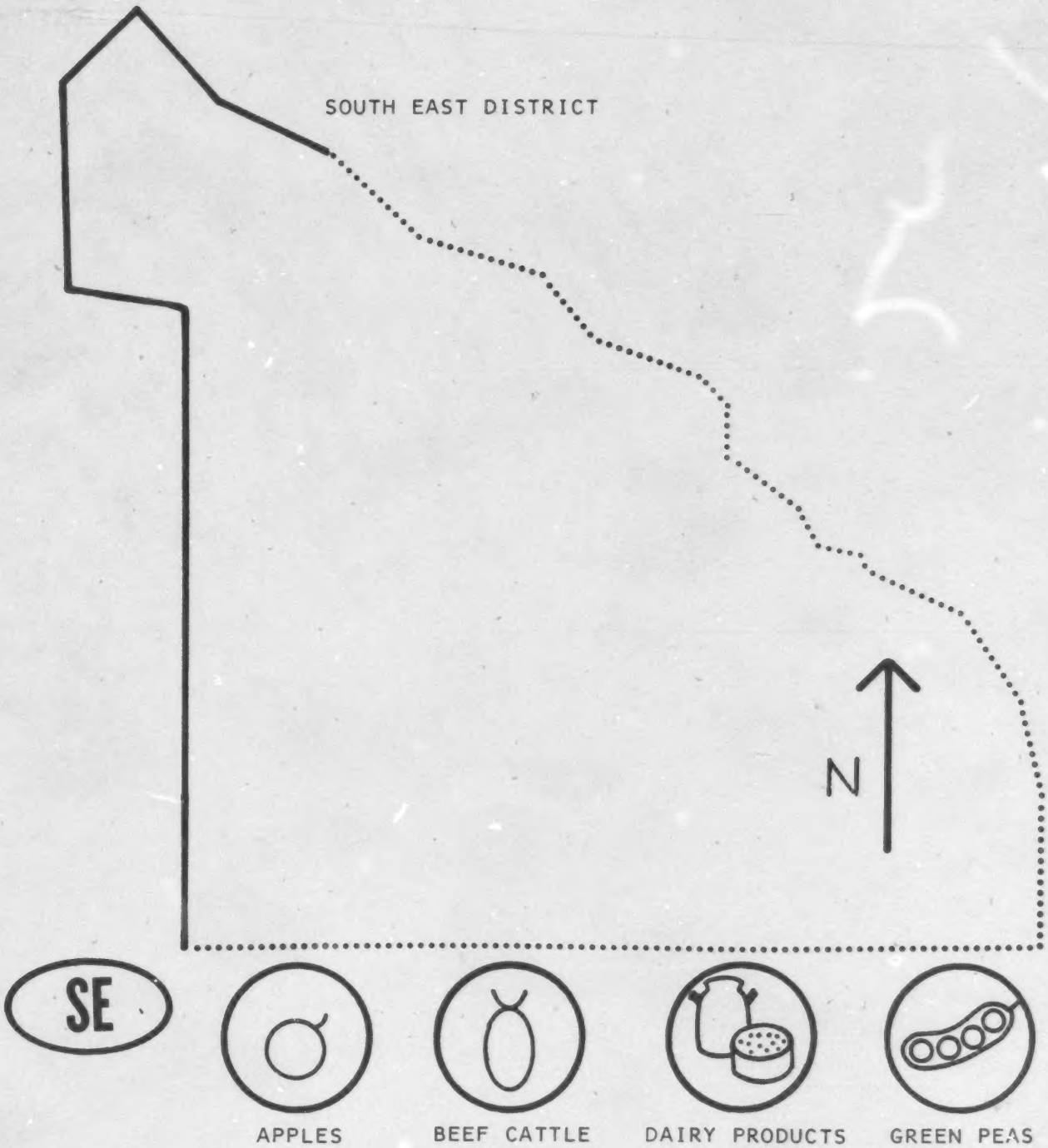




GREEN PEAS SWEET CORN POTATOES BEEF CATTLE SOYBEANS

The shape of each district is on a separate page. Use this outline to transfer the district to a MN map. Put the district initials and the symbol circles within the district boundaries





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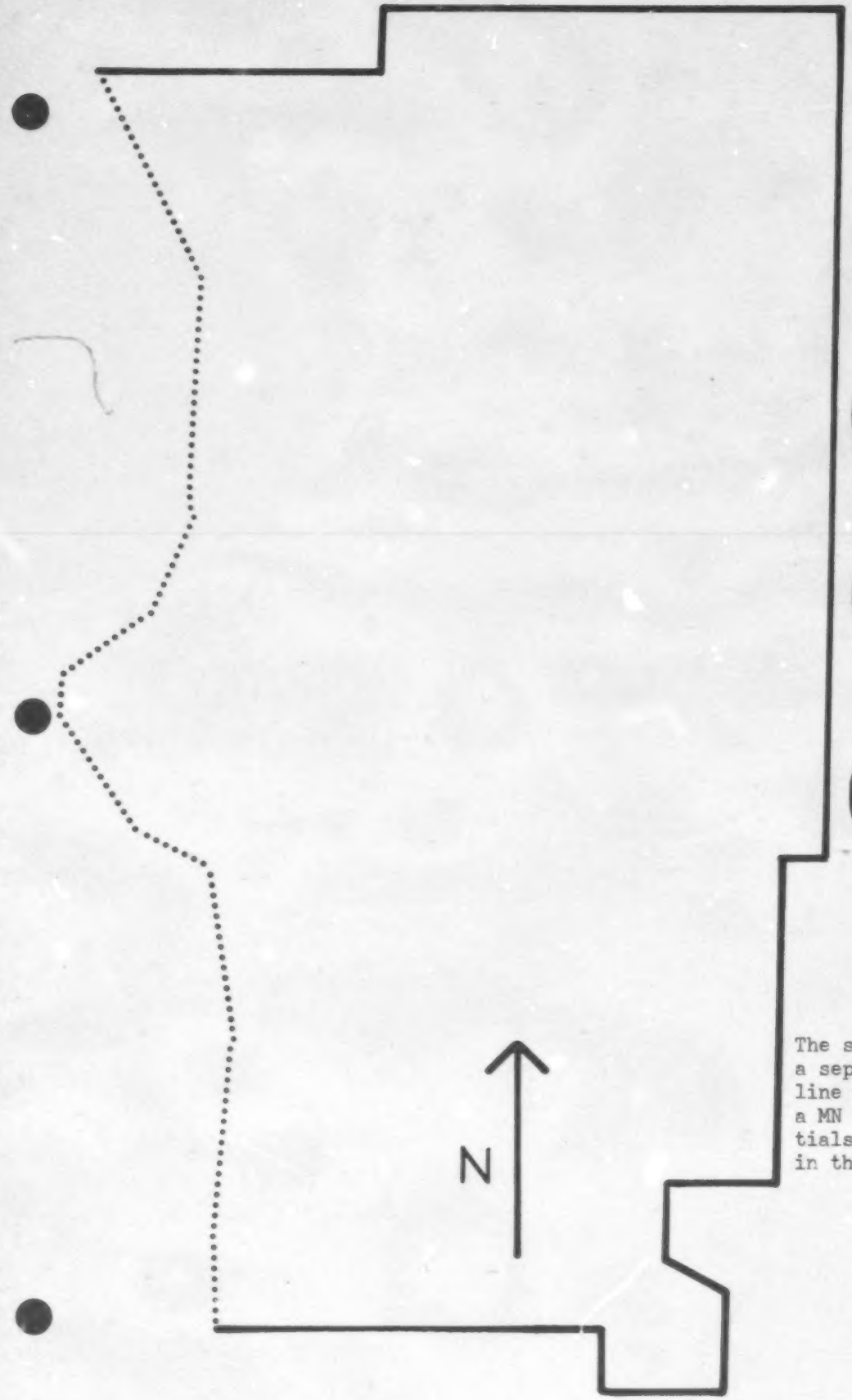
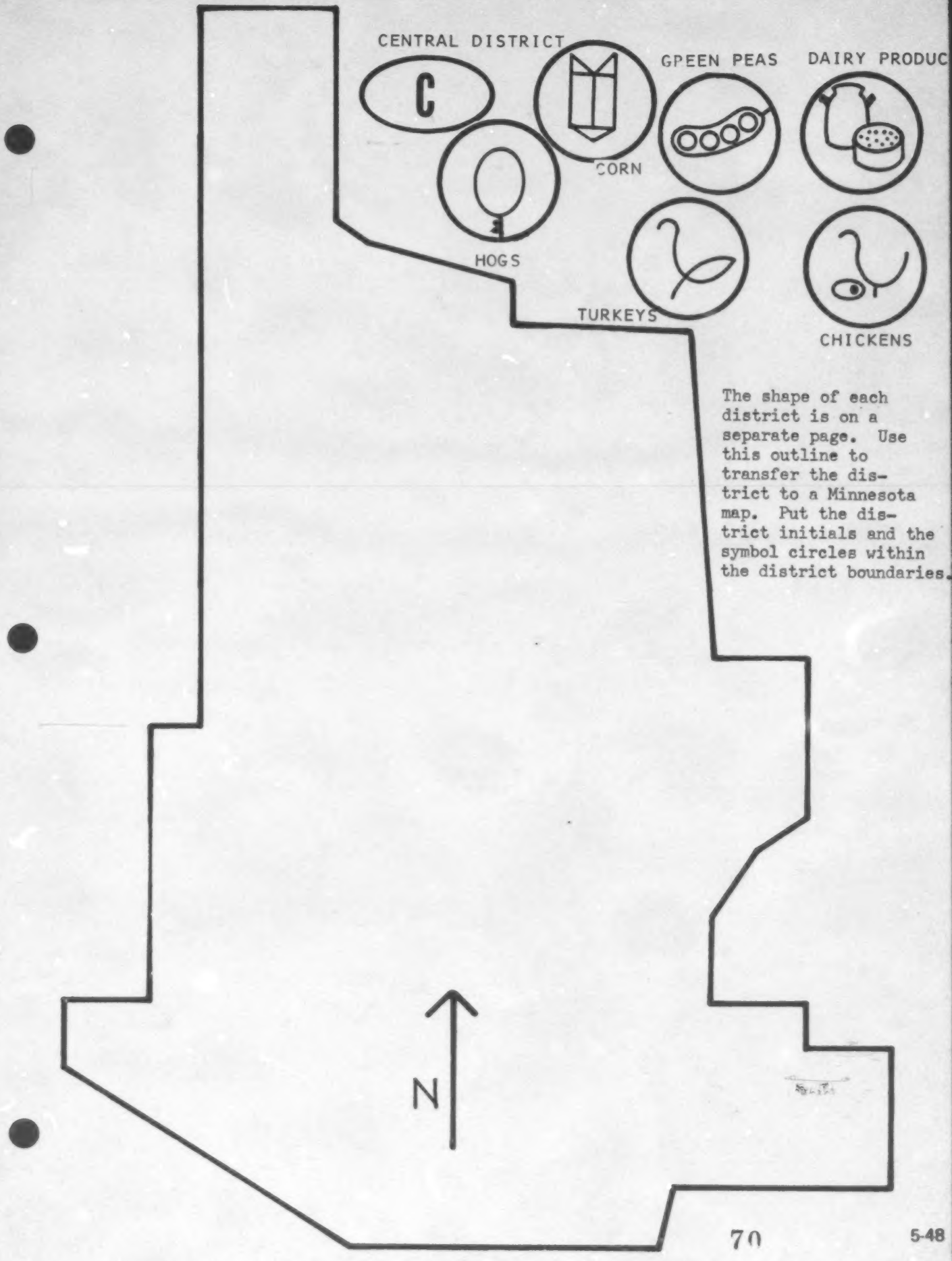


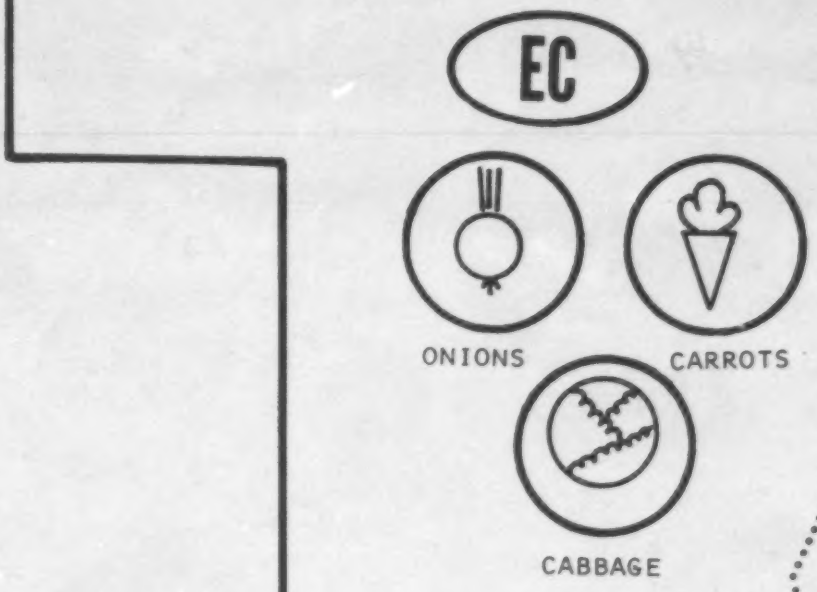
The shape of each district is
a separate page. Use this out-
line to transfer the district
a MN map. Put the district in
tials and the symbol circles w
in the district boundaries



The shape of each district is on a separate page. Use this outline to transfer the district to a Minnesota map. Put the district initials and the symbol circles within the district boundaries.

EAST CENTRAL DISTRICT

The shape of each district is on a separate page. Use this outline to transfer the district to a MN map. Put the district initials and the symbol circles within the district boundaries



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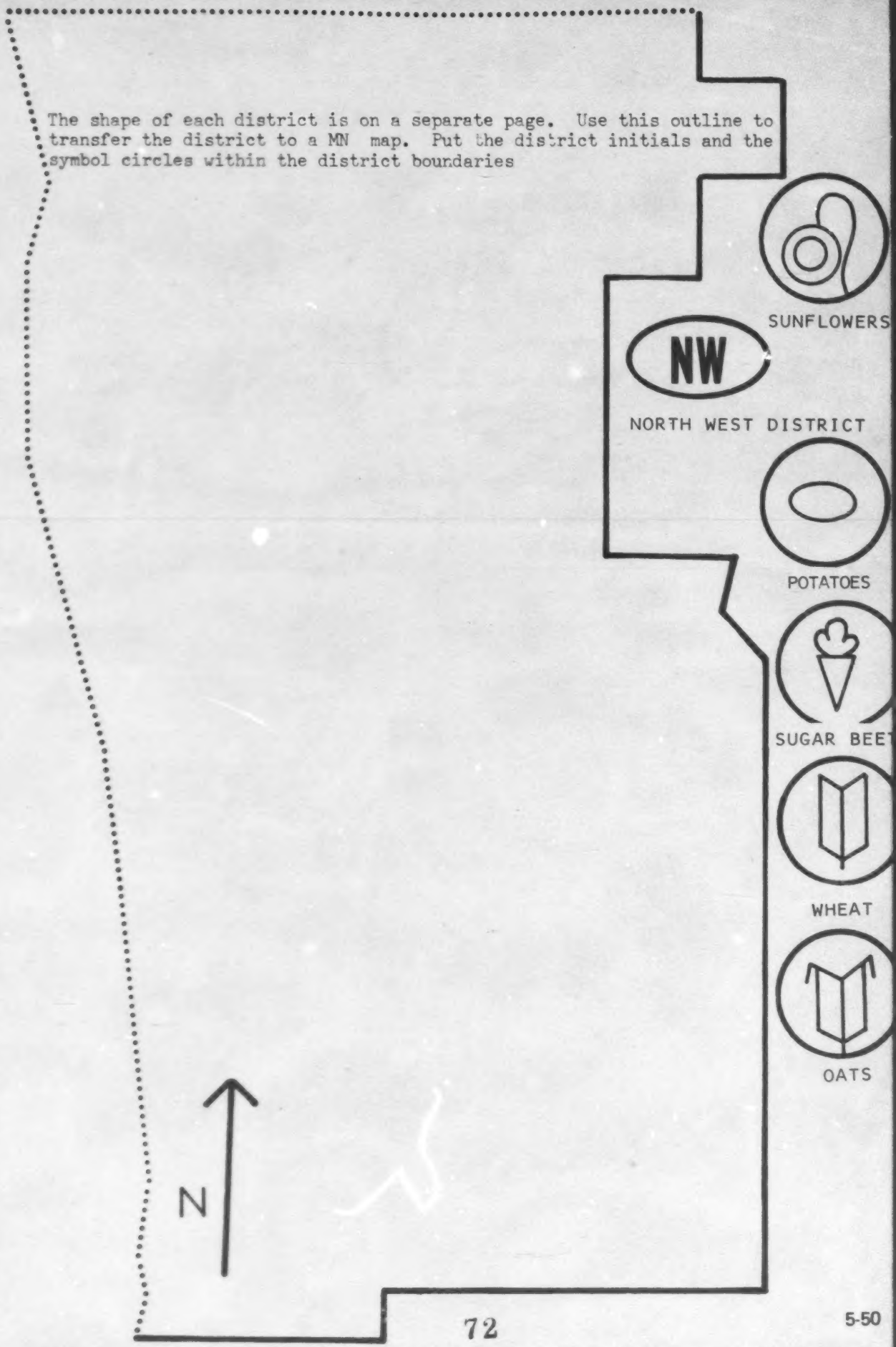
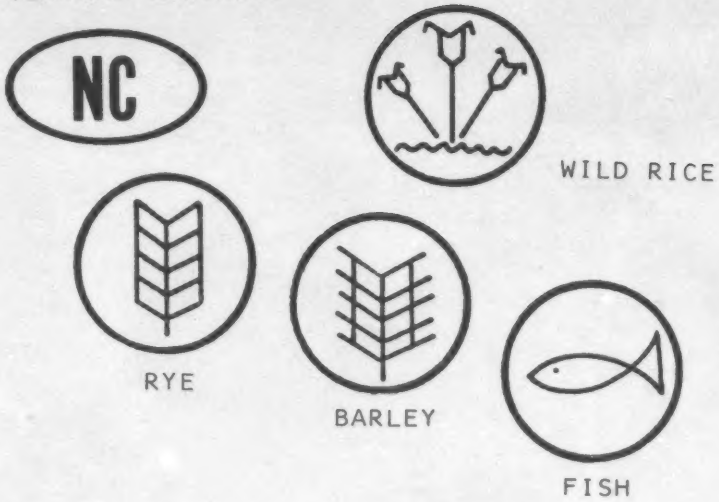


NORTH CENTRAL DISTRICT

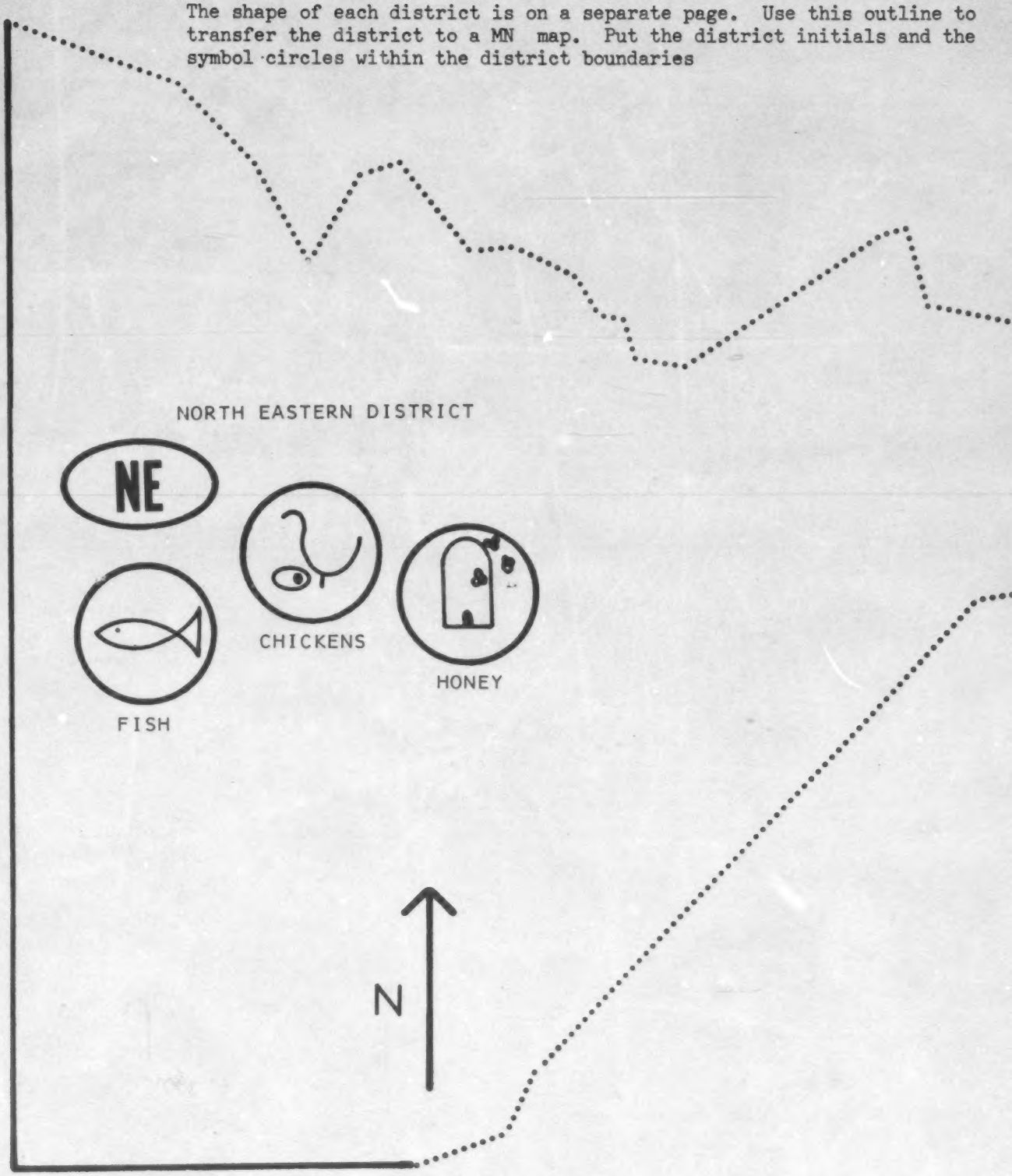


The shape of each district is on a separate page. Use this outline to transfer the district to a MN map. Put the district initials and the symbol circles within the district boundaries

The remaining borders of the North Central District are formed when the Central and the East Central District are placed.

The shape of each district is on a separate page. Use this outline to transfer the district to a MN map. Put the district initials and the symbol circles within the district boundaries

NORTH EASTERN DISTRICT



CONCEPT: Peer influences and supply of money affect food choices.

GENERALIZATION: Peer influence which can sometimes determine food choices of individuals may not always result in the best nutritional value for money spent.

BEHAVIORAL OBJECTIVE: The student will analyze several food preferences of peers as to nutritional value in relation to cost.

* *

--Which Food Gives You the Most Nutrition (attached)
Empty packages of the foods listed on the worksheet with current prices plainly shown. Labels from these foods.

--Duplicate copies of Which Foods Give You the Most Nutrition worksheet.

Tell the students they are going to vote for some foods which they would serve to friends invited to eat at their home. Tell them you will show the foods to them in groups and they are to vote for only ONE food in each group.

Show the food packages and count votes.

Discuss reasons for the choices made. For each group of foods ask:

Why did you vote for the food? (like it best, it looks pretty, it is a fancy food, my friends like it, convenience, variety of ways to use it)

When you serve food to company do you try to serve something they like or you like? Why?

How can you tell when someone likes a food?

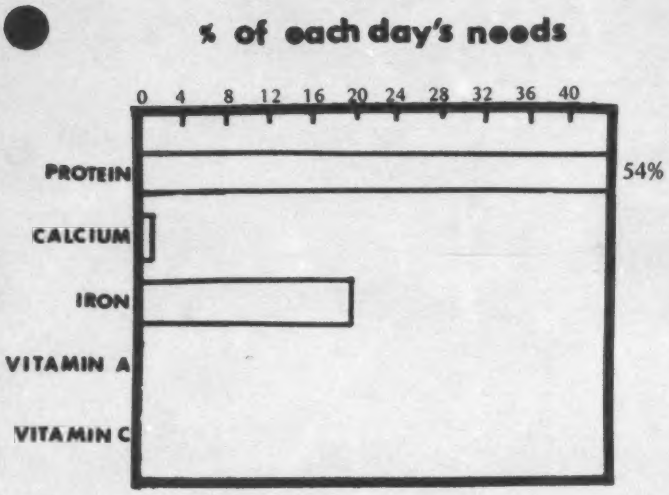
How many of you looked around to see how your classmates were voting before you voted?

For those who voted alone or as a minority, how did you feel when you noticed no one else was voting for your choice?

Do you think people are influenced by the opinions of others where they are making choices sometimes?

--Vote on foods.
Complete worksheets.
Discuss factors influencing choice.

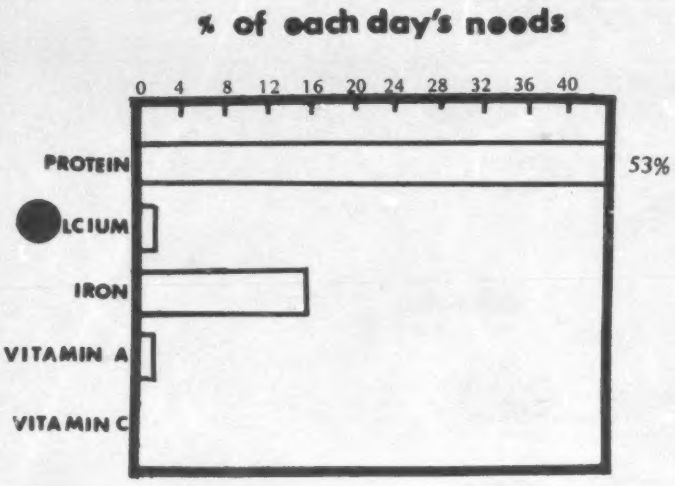
WHICH FOOD GIVES YOU THE MOST NUTRITION FOR THE MONEY?



BONELESS ROUND STEAK

Cost of 1 pound $.....

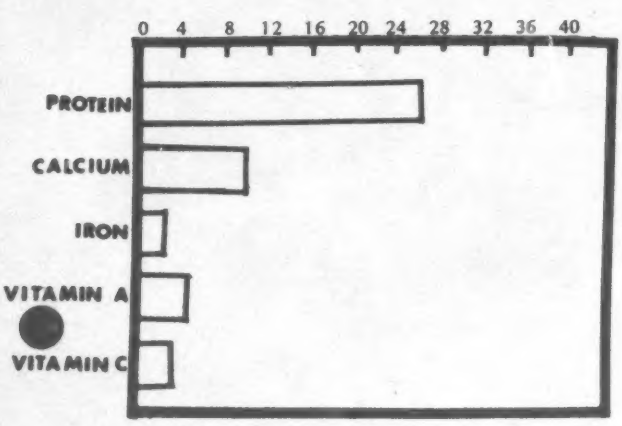
Divide cost of 1 pound by 4 to find
COST PER SERVING.....cents



HAMBURGER

Cost of 1 pound $.....

Divide cost of 1 pound by 4 to find
COST PER SERVING.....cents

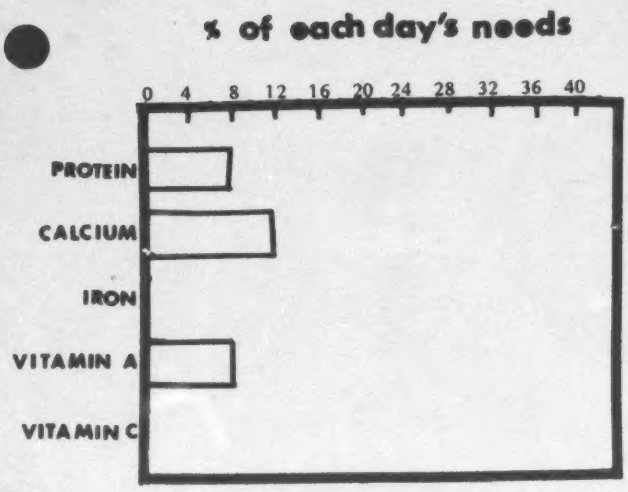


BAKED BEANS

Cost of a can (about 15 ounces) $.....
(Each 15 ounce can has 2 servings.)

Divide the cost of a can by 2 to find
COST PER SERVING.....cents

WHICH FOOD GIVES YOU THE MOST NUTRITION FOR THE MONEY?



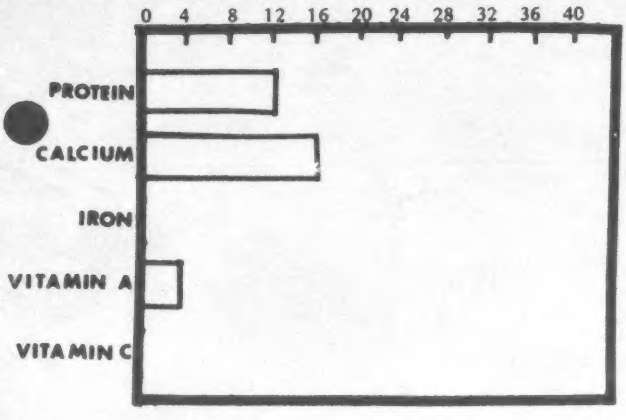
ICE CREAM

Cost of package $.....

Quarts in that package.....

Multiply quarts in package by 4 to get number of servings in package.....

Divide cost of package by number of servings to find
COST PER SERVING.....cents



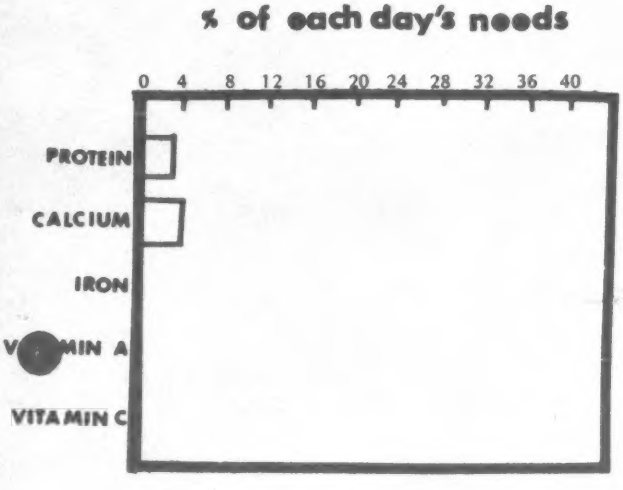
ICE MILK

Cost of package $.....

Quarts in that package.....

Multiply quarts in package by 4 to get number of servings in package.....

Divide cost of package by number of servings to find
COST PER SERVING.....cents



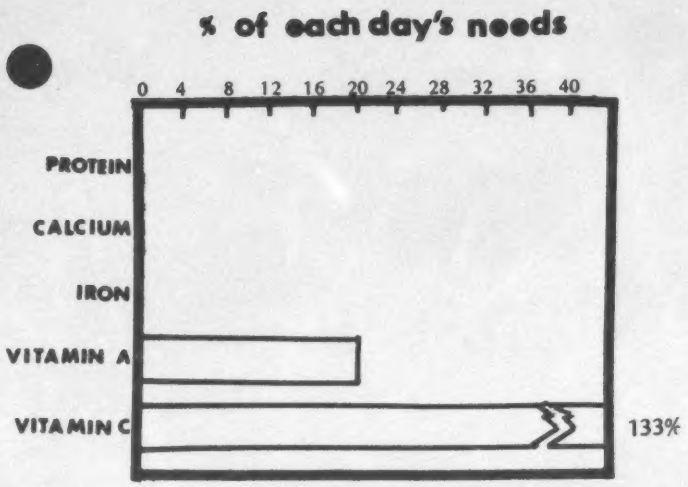
SHERBET

Cost of a package $.....

Quarts in that package.....

Multiply quarts in package by 4 to get number of servings in package.....

Divide cost of package by number of servings to find
COST PER SERVING.....cents

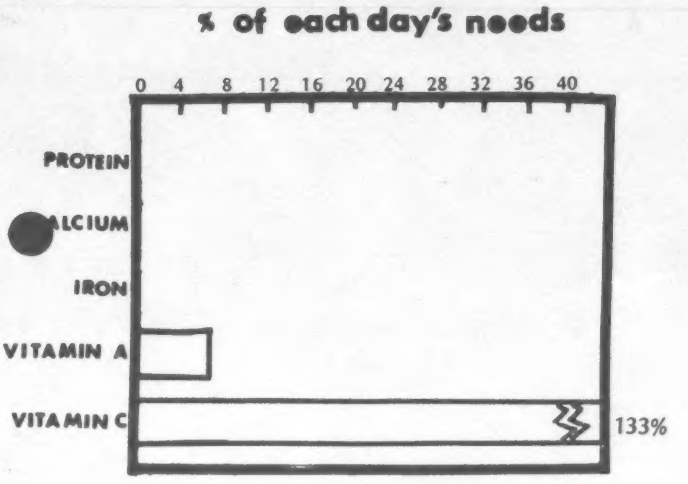


POWDERED ORANGE FLAVORED BREAKFAST DRINK

Cost of a bottle $.....

Number of 6 ounce servings in a bottle.....

Divide the cost of a bottle by the number of servings in a bottle to find COST PER SERVING.....cents



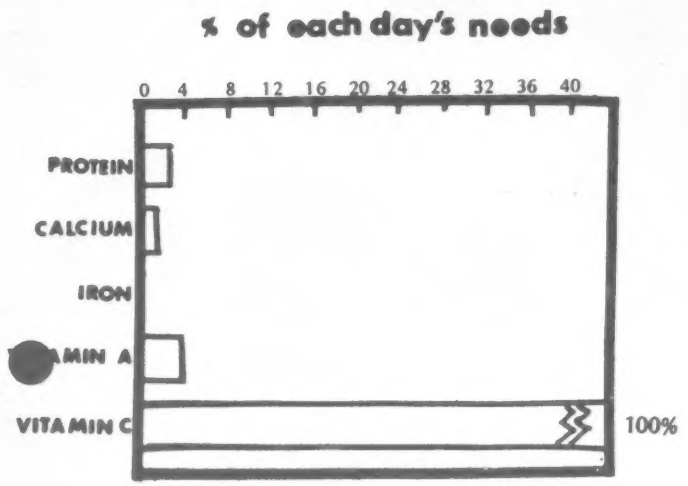
FROZEN ORANGE JUICE

Cost of a can $.....

Multiply the number of ounces in a can by 4 .....

Divide that number by 6 to get the number of servings in a can.....

Divide the cost to get the number of servings in a can by the number of servings in that can to find COST PER SERVING.....cents



ORANGE DRINK

Cost of a can $.....

Fluid ounces in that can.....

Price per ounce $.....

Multiply price per ounce by 6 to find COST PER SERVING.....cents